

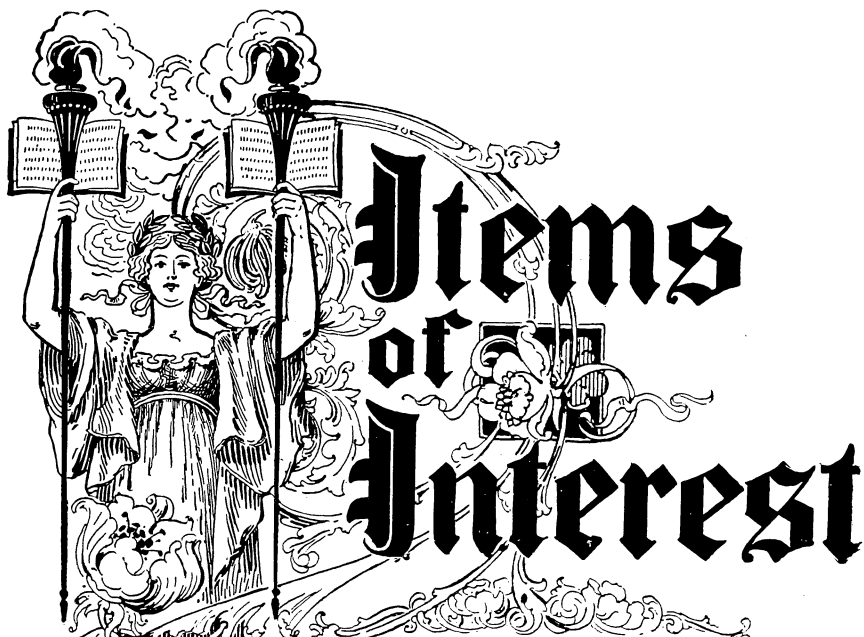
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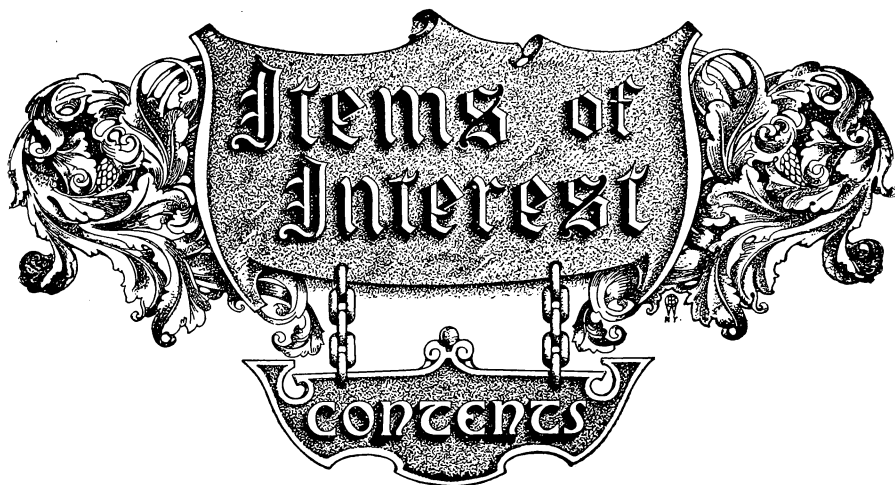
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*Edwin*

Presented in connection with the History of New Jersey State Dental Society.  
From a photograph owned by Dr. M. L. Rhein.



## Minor and Major Oral Surgery.\*

By MORRIS I. SCHAMBERG, D.D.S., M.D., New York.  
Professor of Oral Surgery, Dental Department, Medico Chirurgical  
College of Philadelphia.

### Introductory.

#### Oral Surgery.

*Derivation* (os, oris, the mouth) (χείρ, hand; ἔργον, to work).

#### Definition.

A regional branch of the surgical art applied to abnormalities of the mouth and associated parts.

#### Divisions.

*Dental surgery*, a term applied to all dental operations upon the teeth, the gums and the jaws.

Oral surgery may also be divided into *major* and *minor surgery*. Major operations are those of a serious nature involving the risk of life and usually requiring the administration of a general anesthetic. Example—excision of jaw. Minor surgery includes the surgical procedure of less grave character. Example—extraction of teeth. An absolute line of distinction between minor and major surgical cases can not be drawn, for they are relative terms. Adverse conditions

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may render the most simple operation dangerous, and some of the more difficult operations when skilfully performed have a remarkably low mortality rate.

### **Underlying Principles.**

The basic principles underlying the practice of mouth surgery are identically the same as govern the treatment of morbid processes in other parts of the body. Students and practitioners of dentistry should keep this fact in mind when dealing with wounds of the mouth. The extraction of a tooth should be performed under similar aseptic and anti-septic precautions to those that would be applied for the protection of a bone lesion in any other part of the body. Serious infections and even death of the patient are occasional consequences in even so trivial an operation as tooth extraction where the necessary precautions are not taken.

*An intimate knowledge of dental pathology* is essential to a clear understanding of many diseases of the mouth and the adjacent structure. Medical graduates who have never received this special instruction or training are at a decided disadvantage in the diagnosis and treatment of diseases and injuries of the jaws. Mechanical skill and ingenuity are frequently of the utmost importance in the handling of fractured jaws and in the substitution of artificial devices for tissue lost by disease or operation. This will be made evident when the chapters are reached which will bear upon the dento-mechanical treatment of fractures and upon the replacements of lost portions of jaws by mechanical appliances.

### **Conservation of the Teeth.**

The conservation of teeth at the seat of disease is often possible through the exercise of care during the performance of operations upon the mouth and jaws. The general surgeon is prone to be lax in this particular, sacrificing teeth that may be of great value to the patient. On the other hand, practitioners of dentistry, in their desire to save teeth, occasionally jeopardize the health of the patient and cause the eventual loss of the tooth, after irreparable damage has been done. Malposed third molars can be invariably removed without the sacrifice of the second molars, provided the patient is willing to submit to the operation necessary. The chapter on malposed and encysted teeth will include consideration of this subject in detail.

### **Prevention of Scars.**

The prevention of scars upon the external face should be the aim of all conservative operators. Intraoral operations, where they do not interfere with the thoroughness of the work, are to be pre-

ferred to those causing disfiguring cicatrices upon the face. The author has resected portions of the inferior dental nerve from within the mouth, for the cure of neuralgia, with results that were entirely satisfactory. Bone curettement and other operations upon the jaw may oftentimes be favorably accomplished through the mouth unless there be fistula or sinuses communicating with the external parts.

#### **Constitutional Disease.**

Constitutional diseases are as great a factor in causing lesions about the mouth as in other areas of the body. Affections are commonly noted within the mouth that are related to disturbance of the gastrointestinal tract, to lesions upon the skin, to diseases of the blood, to metabolic disturbances, etc. Syphilis is a frequent offender, and its influence in the mouth may be felt during any of its stages. The various constitutional diseases that manifest themselves within the oral cavity will be considered in due time.

#### **Microscopical Examinations in Diagnosis.**

Microscopical examination of tissue and of secretions from infected areas is important in determining the true character of some disturbances about the mouth. Tumors of all sizes, whether found during their incipency or after they have become extensive in their dimensions and distinctive influence, should be examined to note their true nature. Even benign growths about the jaws if not thoroughly removed may recur and subsequently assume a malignant form. The chapter on tumors will include photomicrographs illustrating the tumors that are common to the mouth.

#### **Radiography.**

Radiography is such an important diagnostic aid in mouth surgery that its value to the dentist and oral surgeon will forcibly bring out the X-ray pictures of abnormalities about the face and jaws.

Pathology and bacteriology, shedding as they do much light upon all forms of disease, will be dealt with in a general way as well as in a manner to point out the special application of these branches to oral disease.

Aseptic, antiseptic and surgical technique will comprise a separate chapter, so that no valuable step that will bear upon the factors that work for success in mouth surgery will be overlooked.

Attention to details, with one thought in mind—*thoroughness*—will guide the author in presenting the subject pertaining to minor and major oral surgery.



## The Principles and Practice of Filling Teeth with Porcelain.\*

By DR. JOHN Q. BYRAM, Indianapolis, Ind.

### Some Phenomena of Color in Porcelain Inlay Work.

The phenomena of color should be studied in a theoretic and practical manner, and the sources of light should be considered. Light has been defined as that form of radiant energy that acts on the retina of the eye and renders visible the objects from which it comes. An object is visible, either because it gives out light of itself (self-luminous), or because it reflects light from its surface (illuminated). The light of the sun or the flame of a lamp are examples of self-luminous bodies, which emit luminous rays in all directions. Light emitted from the sun is said to be white light, while that from artificial sources is said to be colored light. Sunlight is represented by white, while darkness is represented by black.

Color is a sensation produced in a variety of ways, but preeminently by the action of light on the retina. The specific effect produced depends upon the character and combination of rays that reach the retina. The source of color is light, and it is lost or destroyed by darkness. Colors are divided into inherent and transient. Inherent colors are material or colored substances such as the pigments used by the dyer, painter, etc. Transient colors are those formed by the decomposition of light, such as those of the rainbow or the prism.

Some of the phenomena of light which assist in producing colors from pigments are absorption, transmission, reflection, and refraction. If a pigmented transparent body absorbs certain colored rays and transmits others, it will appear to be colored from the combination of the transmitted rays. A translucent body transmits, reflects, and absorbs rays and its color is determined by the quality of light reflected or transmitted. If light penetrates a short distance into a body, and is then reflected, its surface generally appears to have the colors of the reflected rays. Light is not transmitted by opaque substances, but the rays are either reflected or absorbed. When, therefore, light is incident upon an opaque body, it is wholly excluded from the opposite side. A light beam passing from one medium into another of different density is bent or refracted at the boundary plane between the two media. This deviation

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of light waves in passing from one medium to another varies with the media and with the angle of incidence. Reflection usually accompanies refraction, and this phenomenon causes much of the uncertainty of results in applying colors.

When red, orange, yellow, green, blue and violet rays are combined in proper proportions, white light is formed, but when red, orange, yellow, green, blue and violet pigments are properly mixed black is produced. The first phenomenon is caused by the combining of colored light by a process of addition of rays, and the second is a result of adding pigments and subtracting light, for all the rays transmitted are absorbed or quenched by another pigment.

While all pigments have the power to reflect or transmit light, it is their power to absorb certain rays that assists in producing color. The colors of stained glass, porcelain, etc., are examples of this phenomenon. Such pigments as those used by dyers and painters are but representatives of colors; they imperfectly represent the primary colors. There are no pigments which produce colors that absolutely match the primary—red, yellow and blue. Red pigments reflect or transmit red, yellow and orange rays and absorb violet, blue and green rays. Yellow pigments transmit or reflect red, orange, yellow and green rays and absorb blue and violet. While blue pigments transmit or reflect green, blue and violet rays and the remaining rays, red, orange and yellow, are absorbed by these pigments.

If pigments could be obtained which truly represented each primary color, the laws of color could be more accurately illustrated; but since this seems impossible the colorist is beset with many difficulties. Pigments are very often obtained which nearly represent their respective primaries, but when these are mixed they do not produce a good secondary color, because of such differences as transparency, opacity, chemical components, etc.

One of the most prevalent theories of color formation from pigments treats red, yellow and blue as the primary colors. According to this theory the many colors used by colorists may be made from these three. When two of these primary colors are combined secondary colors are formed. Red and yellow, for instance, give orange; red and blue yield violet; and yellow and blue produce green. By combining the three primary colors so that complete absorption of light takes place, black is formed. Those colors produced by the three primaries are termed tertiary colors. The third primary color, however, does not produce a new hue, but merely saddens the other two by forming a certain amount of gray or black in the combination. They are often termed the dulled or broken tones of

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the primaries or secondaries. Orange and violet produce a reddish brown. Green and orange combine to form a yellowish brown. Green and violet produce a bluish gray.

Colors have three principal qualities known as **Qualities of Colors.** hue, purity and luminosity. These are generally spoken of as constants. The excessive predominance of one color over another gives the hue to that color and the greater this predominance the stronger will be the hue, *e. g.*, when blue and yellow are mixed green is produced. If yellow predominates, the green will have a bluish hue.

The purity of a color is its lack of mixture of white or black, or any of the colors. These not only weaken the color but change its character. This can be shown by adding white porcelain to yellow. The yellow is not only diluted but tends to take a different hue.

The luminosity of a color is measured by the amount of light reflected to the eye, and is, therefore, independent of hue or purity. The most luminous color is yellow, while the least luminous is violet; between these extremes are all the intermediate degrees of brightness. In those teeth where light yellow and blue predominate they appear more translucent, because they reflect and transmit the rays; while in those teeth where gray and brown predominate they have a somewhat dull appearance, because their power of reflection and transmission of light is not so great, as more of the rays are absorbed on the surface.

Gradations of tint, shade and hue are numerous, according to the power of perceiving them, and this power greatly varies with different individuals. Much of the success in coloring depends on the keen and delicate perception of gradations. One totally unfamiliar with the principles of color formation and whose eye is not trained to detect the delicate hues, rarely sees all of the gradations of color in a tooth, while one with a trained eye will distinguish hues of colors that are wholly imperceptible to another.

The pigments most commonly used in the manufacture of dental porcelain are precipitated gold, platinum, purple of Cassius, the oxides of gold, titanium, manganese, cobalt, iron, uranium and silver.

The colors produced by the use of these pigments in varying proportions are red, yellow, blue, green, brown and gray. In referring to red, yellow and blue, used by the porcelain worker, it must be borne in mind that only the hues of these colors are used. But for convenience we shall refer to their hues as the colors.

Red is used extensively by inlay workers. Still all gum enamel frits are tints of red. It may be added to brown to increase its luminosity. Its

tints should be used on the labial or buccal surfaces in building that portion of the inlay which may extend rootward beyond the gingival line.

Yellow, the most luminous of the colors, is the one most closely allied to light, and it is the one used most by the porcelain inlay worker. It should be used to form the foundation of most inlays. It adds brilliancy to brown and gray when added to them. Yellows of a greenish hue tend to lose their luminosity in yellow light, while yellows of a reddish hue are most luminous. Two yellows in their deeper tones may match each other perfectly, but when diluted to give lighter tints they may differ quite widely; one may be of a greenish hue, while the other may tend toward a red.

Blue is used to build the body of the incisal and occlusal portion of inlays for those teeth with blue incisal edges or cusps. It may be added to grays with a bluish hue to intensify them. There is a variation in tone from blues with a greenish hue to those with a reddish hue. The former with a greenish hue are more luminous and appear to be more translucent.

Green is seldom used alone, but it may be added to yellow to give it a greenish hue and to blue to increase its translucency. Browns should be used to build the gingival portion of some inlays and also for the body of inlays for discolored teeth having a brownish hue. Grays are principally used to build the middle and incisal and occlusal portion of these teeth with a grayish hue. They are also used to sadden yellows and blues.

The various hues of colors are produced by mixing pigments in various proportions or by superimposing a layer of one pigment upon another. The intensity of a color is controlled by the intensity of the pigments used and by the thickness of the layers of pigments. Two or more shades of a color can be made of the same porcelain by varying the thickness of the body. Knowledge of this fact is important in the application of porcelain. For, after porcelain has been applied and fused, it is often found that the color is changed. The trouble may arise from several causes. The layer of enamel may be so thin that it is highly translucent and light from the underlying layers is readily reflected through it. The underlying layers may be constructed of porcelain whose pigments are so intense that they cause the inlay to appear too dark after the final layer of enamel has been applied.

**Method of  
Learning Color  
Combination.**

If the beginner is not familiar with the formation of colors, he should purchase a water color outfit, consisting of the three primary colors, red, yellow, blue, and a drawing book with white leaves. He should first study the variations of a color produced by decreasing the thickness of the layer of pigment. This is done



by saturating the brush with the desired pigment, then varying the thickness of the layer on the paper. The next experiment should be to make binary combinations. First, red and yellow are mixed in varying proportions, showing orange with a reddish hue and orange with a yellowish hue. The same experiment is made with red and blue, showing the variations of the hues of violet from violet with a reddish to violet with a bluish hue. Yellow and blue are next mixed, showing the variations in green from a bluish to a yellowish hue.

After the experiments of producing secondary colors by mixing pigments have been completed, the next experiment should be to produce the same colors by applying a layer of one primary color to the paper, and, after this has dried, placing the second primary over the first layer. When the experiments with the binary combinations have been completed, experiments with the tertiary combinations should be made. Two primary colors are mixed and the third primary is added in varying proportions to produce browns and grays. Black can also be made from the three primary colors by mixing them in proper proportions. At this time black and white pigments should be introduced; and the process of tinting by diluting pigments with white, and saddening colors by the addition of black, and combining black and white to make grays should be studied.

After experimenting with water colors, the beginner should carry on a line of experiments in colors with porcelain. For this work he should use yellow, blue and dark pink. It has been found that those manufactured by the S. S. White Dental Manufacturing Company especially for this purpose are the most satisfactory. While these colors do not match the primary red, yellow and blue, and do not meet the requirements in an entirely satisfactory manner, they enable one to obtain results that prove that the formation of colors from pigmented porcelain depend upon the same phenomena of color formation that are involved in the formation of colors from other pigments.

**Method of  
Learning to Combine  
Porcelains.**

A suitable mold should be constructed, in which the various combinations can be made. The beginner should mold and fuse various combinations of red, and yellow, and blue in varying proportions. After studying the phenomena of color formation in porcelain, a shade guide for inlay work can be made by combining porcelain powders in definite proportions.

Dr. V. Walter Gilbert, in his "Notes on Dental Porcelain," offers the following suggestions to beginners: "The best way for a beginner in porcelain work, therefore, is to experiment in the mixing and fusing of colors before he attempts the construction of a practical inlay or crown.

This work can be made immediately profitable in experience, for he will need a set of sample shades made from the materials he is to work with. He will find greater satisfaction in working to shades of his own compounding than with any fixed samples of mixes supplied by the manufacturers of the material. Of course, in making these buttons he will need to note carefully the exact proportions in each experiment. He will thus have an invaluable record, and every experiment will serve as a guide in his future practical work; the failures advising him what to avoid, the successes pointing the clear way to useful results."

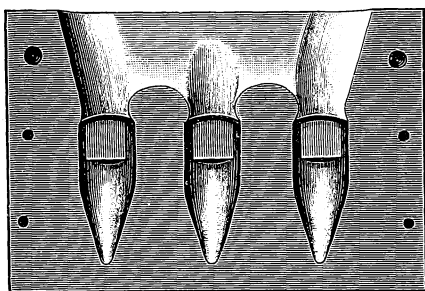


FIG. 92.

**Making Shade  
Samples.**

A practical method of making new shades from the powders furnished by the manufacturers is to carve a suitable form in plaster, wood or metal, and from such a form make a mold with Melotte's metal. (Fig. 92.) By the use of such a mold new shade forms of uniform shape and size can be made.

Weigh out varying proportions of the different colored powders and mix with water to the consistency of dough, then oil and press it into the mixed porcelain. If the mold has been properly made, an imprint of the desired form will be made in the porcelain, and this when properly trimmed and fired will record the new shade so produced.

Care should be taken to record the various mixtures so that they may be duplicated at any time. The keeping of such records may be made in this way—using the letters of the S. S. White Dental Manufacturing Company's porcelain to illustrate: Three parts of A added to two parts of B will produce a new shade, which can be designated as No. 1, or by any name desired, and can be recorded thus:  $3A + 2B = \text{No. 1}$ . It will be observed that by making shades as here suggested there is no limit to

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the number of shades that can be produced. To illustrate still further: A is gray, while G is white or colorless, used principally as a modifier to get gradations of other colors.

Make mixture of varying proportions of A and G, thus:  $9A + 1G$ ; then another mix  $9A + 2G$ , and so on. By combining each of the other shades in this way with G, two hundred and fifty gradations will be produced, and this is only the beginning of the possible combinations.



FIG. 93.



FIG. 94.

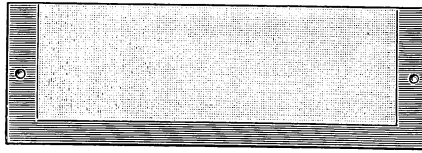


FIG. 95.



FIG. 96.

The method just described answers very well if the texture of the porcelain is coarse like that of the Allen and Close bodies; but if the texture is fine, like that of most porcelain now used, there will be more or less difficulty in removing the porcelain from the mold. This difficulty is due to the close adaptation of the fine particles of porcelain.

When making new shade samples from a fine texture porcelain, the same mold (Fig. 92) can be used, but the method of using must be changed. In place of mixing the porcelain with ordinary water and pressing the mold into the porcelain, it is advisable to use gum water and

press the porcelain into the mold. The mold containing the porcelain can then be placed in a suitable ladle and melted, thus delivering the porcelain shade sample in a perfect condition. Another mold can be made in a few minutes by flowing metal over the original metal form.

Another method of making individual shade samples may be described as follows: A metal mold, consisting of four parts, can be readily constructed so that the mixed porcelain can be poured or dropped into it and the mixing medium absorbed. Fig. 92 represents the front face of such a mold; Fig. 93, the pouring gate; Fig. 94, the part which carries the pins for making the holes in the finished shade samples; Fig. 95, the back face, which holds the absorbent plaster. To make sample pieces in a mold of this description it is necessary to thoroughly oil all working faces, hold the parts together with a clamp of some kind, and then drop the thinly mixed porcelain, drop by drop, into the mold, being careful not to clog up the opening. When the mold is filled, put it aside until the porcelain sets; then open the mold and gently remove the porcelain castings (Fig. 96). When the plaster becomes saturated with the mixing fluid, knock it out of the frame and pour a new back.

#### **Matching Human Teeth with Porcelain.**

One phase of inlay work which will always be perplexing is the difficulty in obtaining colors that accurately match the natural teeth. The enamel is a hard dense substance, presenting a glazed-like appearance, which causes it to be almost transparent. The dentin, on the other hand, is a porous-like substance which prevents the light from being transmitted freely and causes it to be but slightly translucent. When we consider that teeth are composed of both organic and inorganic materials with a variation in their density, and that they are colored with pigments peculiar to them, we can readily understand how difficult it is to match tooth structure with a substance inorganic in composition, differing in density, and colored with different pigments.

In discussing this point Dr. C. N. Thompson, in *Dental Cosmos*, May, 1907, says: "A study of the normal tooth reveals the fact that its exact reproduction is impossible, yet to restore tooth-structure in appearance with porcelain without due consideration for the details of the make-up of the normal tooth is a mistake, for an examination of a cross section of the natural tooth reveals the enamel nearly opaque. Compare this with a cross section of a porcelain tooth, and it is not hard to discover the reasons for some of our difficulties, as well as to know that there must be method in our efforts if we would secure results.

"Dentin is so nearly opaque that it transmits light but feebly. Its opacity seems to be due, as much as to anything else, to the condition of

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its external surface, which is without glaze—under the magnifier it seems rough, like fine sandpaper. The external surface stops the light as do crushed transparent substances generally—as, for instance, common salt—for the reason that the rays of light are so often reflected among the particles on the surface that they are scattered into a multitude of crossed reflections that appear white, and therefore can not enter. Thus it follows that whatever surface will not admit light will also refuse to allow a reflected shade to pass; consequently if the dentin can be restored with a very high-fusing porcelain that becomes densest before it glazes, that presents a vitreous surface resembling sandpaper, and of the color of dentin, we have produced a foundation for the filling that will not absorb sufficient light to cause a shadow, and which, if not glazed by a subsequent baking, will still retain the power to arrest transmitted light, no matter how the colors and enamel are laid on afterward.”

Another difficult problem is the formation of a shade. A shade for the purpose of this work may be defined as a deficiency of light within an illuminated region, caused by the interception of light by some body, or a condition produced by a reflected light. When the light is incident on the teeth or lips, it is partially excluded from all or a portion of inlays in some of the teeth, and this causes the inlay to appear much darker. This fact should be considered when selecting colors for an inlay. The color of the tooth should be studied with the incidence of light at different angles and with the lips partially covering the tooth. In selecting colors for inlays in the distal surfaces of laterals and cuspids, the hues of the color should be lighter than for inlays on their mesial surfaces. If a porcelain inlay is placed in approximation with a gold filling, it will appear darker because a portion of the reflected shade from the gold will be absorbed by the porcelain, then returned to the surface of the inlay and reflected to the eye, which gives to the porcelain a saddened appearance.

### **Influence of Cement on Color.**

A change in color is often noticeable when an inlay is cemented into place. The inlay may be a good match when the incidence of light is at such an angle as will permit its transmission. But when the angle of incidence is changed, some portion of the inlay may appear a different color, caused by the formation of a shade. In this phenomenon the cement is the chief factor of the color problem. If it were transparent, it would not prevent the passage of light through the tooth. If light penetrates a short distance into a body and is then reflected, the surface generally appears to have the color of the reflected rays. But since light is not transmitted by an opaque substance, the rays are either reflected or absorbed. Whenever light is incident upon an



inlay, it is excluded from the dentin, on account of the layer of cement, which forms an opaque body, and the color of that portion of the tooth and inlay which is in contact with the cement may differ from the other parts because of the unequal absorption and reflection of the rays.

Regarding reflected shades, Dr. Thompson, in the same article, says: "All illuminated bodies scatter or reflect light, and are distinguished from each other by the kind and amount of light they send to us, their power of selective absorption and surface reflection determining the color. If the source of light be a point, as in the electric arc light, the shadow is sharply defined; if, on the other hand, it comes from a luminous surface, as the sun, the edges of the shadow are fringed and imperfect, due to the angular magnitude of the sun. For example, the shadows of minute objects disappear almost immediately in sunlight, whereas the same objects in the arc electric light cause a well-defined shadow for a considerable distance if thrown upon a screen. This explains why porcelain fillings are more conspicuous in artificial light than in sunlight, the shadows thrown appearing more definite.

When light passes from one optical medium to another, a portion of it is always turned back, *i. e.*, reflected. This partly explains why a highly glazed filling that does not appear correct may be improved by grinding or polishing. A slight roughening of its surface causes less direct exterior reflection, and although it thus renders the surface slightly more opaque, it renders the deeper coloring more prominent, because light is reflected regularly and more fully by a glazed surface."

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## Our Errors in Physics.

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By DR. O. KABILL.

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Dentistry at the present time is claiming to rest on a scientific basis in workmanship and theoretical knowledge, but I am sorry to say we are still using definitions for the physical properties of gold which are more or less scientific absurdities.

We differentiate between cohesive, semi-cohesive and non-cohesive gold yet we know that gold, like any other solid, is cohesive, or semi-cohesive, in a molten state, while non-cohesive gold science knows to exist only in the fiery heat of suns.

One might say sophistically that all this is well known and that the terms are only used to differentiate the slight variance of cohesion in the different golds.

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This would be a poor excuse if correct, but unfortunately if there is a noticeable difference in the degree of cohesion between cohesive and non-cohesive gold, the so-called cohesive gold must have less cohesion than the latter.

To prove this: If one takes pure gold and anneals it, one changes the specific gravity of the metal; it becomes lighter, it has changed from a state of greater compactness into a lesser.

How did this happen? The heat increased the molecular rotation at the expense of that part of molecular force which holds the molecules together and which is known as cohesion. The intermolecular spaces are thereby enlarged and the gold increased in volume.

This increase of intermolecular space progresses at the expense of cohesion; then additional heat, or, in other words, additional increase of molecular space, will melt the gold and destroy more of its cohesive force, while the great heat of our sun destroys all molecular connection and contains gold in gaseous state, when its cohesive power is entirely lost.

One must remember that the molecular force is constant in every molecule. If we decrease cohesion we have not destroyed any molecular force; suppose one hundred per cent. of molecular force of hammered gold is employed as cohesion, then in annealing by decreasing cohesion, only ninety-nine per cent. are active; thus we liberated one per cent. of molecular force, which on suitable occasion will again cohere. That is why we can weld annealed gold in a cold state.

Therefore, non-cohesive is necessarily more cohesive, and the correct term for cohesive gold should be gold containing free cohesion (commercially, perhaps, mentioning the degree of free cohesion in percentage, which would be determined by experiment).

### **Adhesion of Gold.**

Defenders of the old nomenclature will say here that by "cohesion" is always meant "free cohesion," but I am impolite enough to deny it.

Through the pages of our dental publications is eternally appearing the word "adhesive." It is asserted that "non-cohesive" gold is "adhesive," and *vice versa*; experimental proofs of this claim are not lacking, and still all our teaching about adhesion is absolutely incorrect.

Let us go back to semi-cohesive or molten gold. Molten gold has great adhesion. It will adhere to platinum or kindred metals, even after solidifying; all soldering is the employment of the adhesive quality of molten metals.

Adhesion is scientifically nothing more nor less than molecular force diverted from cohesive action, by heat or other means, and acting on molecules of a different chemical composition.

In short, molecular force is constant and the sum of its cohesive and adhesive properties; or if molten gold or semi-cohesive gold will decrease its specific gravity with the increase of adhesion, then one can determine the degree of adhesive power of different golds by comparison of their specific gravities in inverse ratio.

Gold with free cohesion, therefore, must be more adhesive than the "non-cohesive" gold of commerce.

Let us examine these so-called proofs of the adhesive property of non-cohesive gold. All the so-called facts ignore the presence of capillary attraction in the oral cavity.

**Capillary Attraction.** What is capillary attraction? Capillary attraction is the adhesive power of cohesive bodies on less cohesive (mostly on liquids). This power is the greater, the nearer the surface molecules of solids come together, so long as there be room between solids the size of the molecule of the liquid.

A filling is constantly under water, and every little crevice between tooth and filling will act as a capillary tube.

Let us repeat now the late Professor Mueller's experiment.

Professor Mueller had two glass tubes filled carefully, one with "cohesive" and the other with "non-cohesive" gold. (I use the old familiar terms for gold.) The specified gravities were the same. The tubes were thrown into ink, and after a time the cohesive gold showed signs of penetration, while the non-cohesive gold did not.

Therefrom he concluded that non-cohesive gold was more adhesive; that it adhered to the walls of the glass tube.

If the gold had been inserted into the glass tubes so perfectly that there would not be room enough for one molecule of ink between gold and glass, no power could force the ink to penetrate.

The ink did penetrate, and as the specific gravity of the two golds was the same, there were presumably the same spaces between glass and gold in either test tube.

So there were spaces; capillary attraction was present, and as adhesion is the cause of capillarity, therefore the test tube showing ink-stains contained a gold of a greater adhesion, and this gold was not the "non-cohesive" but the "cohesive" gold, which was not supposed to have any adhesion at all.



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### **Soft Gold and Hard Gold.**

Another misnomer. We call non-cohesive gold "soft." If we anneal it, it becomes "hard." That is, only the gold used for fillings. In the laboratory we anneal gold to make it pliable and "soft." How is it that a fact in the laboratory becomes a fallacy in the operating room?

I admit that to all appearances it is softer to the touch of the plugger, but simply because the layers of the pellet do not unite. With annealed gold we are liable to compress the layers to one piece, which by its greater thickness seems much stiffer and harder.

Let us consider now the "creeping" of gold in a cavity which is supposed to enable us to fill difficult undercuts. Like the gold beater that stretches the gold into thinner and thinner sheets, so we hammer lustily until the gold flows like water into all recesses and guarantees us a perfect filling.

I wonder if the enthusiastic disciple of this practice ever considered what the result would be if the gold beater put fine little serrations into his gold beater's hammer and instead of the smooth gold beater's skin would use an anvil of the smoothness of the average floor of a cavity. The gold would not "flow," but from his lips a lot of language might.

If it were, after all, possible to make gold "creep," we first of all must have it reduced to its greatest possible density, a feat which I think has not even been accomplished in an iron matrix, except with a sledge hammer.

There are still some minor assertions and erroneous opinions, but they seem to be merely hobbies of a few, so I will not mention them, but I beg the profession to seriously consider my arguments, and do not spare me if it can be shown that I have erred in my definitions of physical laws, laws which are so very little understood that I have not found anybody who could tell me authoritatively whether I am right or wrong.





## President's Address.

By DR. HERBERT A. PULLEN, Buffalo, N. Y.

*Read before American Society of Orthodontists, Detroit, Mich., Oct. 3, 1907.*

Mr. President, and members of the American Society of Orthodontists:

Analysis and synthesis are two words of frequent use in science, and although one is almost the antithesis of the other, analysis meaning to break down structures, to discover their unit composition, and synthesis to build up a structure from a unification of unit components, their inter-relation is such that science could not dispense with one without serious consequences.

The microscope is analytical, enabling the histologist to discover the unit of tissue structure, and text-books on anatomy have had to be re-written to harmonize the synthetic construction of the science of human morphological structure to its analytical cellular structure.

Physiology and pathology have alike been compelled to rearrange their synthetical treatises in accordance with an analytical study of cellular life.

Why this reconstruction, why the years of unremitting toil, the one with the microscope, the other with the naked eye, uniting in their endeavors and finding a harmony in the work of each other? It is because beneath it all is the truth, which in science, as well as in theology,



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contains the greatest good for the greatest number, because of the benefit to mankind, the spirit of true helpfulness being uppermost.

But strange as it may seem, the man with the microscope, and the theologian with his discussion of the higher criticism, sometimes becomes so absorbed in his task of picking things to pieces that he neglects to put them together again; he is accustomed to working at a tangent to the sphere of universal usefulness, and soon the world loses sight of him, even as he has lost sight of the truth shining at his elbow, which he has forgotten to but give a turn of his head to see.

This is a scientific age, and the breaking down and building up processes are going on in every art.

Human knowledge is a wonderful thing in its varied comprehension of the universe, of the trivial or important events, which go to make up history, art, literature, science, religion and philosophy.

Arthur James Balfour, the famous Conservative politician and writer, has most concisely and clearly described the fundamental and evolutionary principles of knowledge in a work entitled, "The Foundations of Belief," which he wrote "for the general body of interested readers, rather than for the specialist in philosophy," his object being "to recommend a particular way of looking at the world problems, which, whether we like it or not, we are compelled to face. I wish to lead the reader to a point of view whence the small fragments of the infinite whole may appear to us in their true relative proportions."

He says, "Assuming that knowledge exists, we can hardly do otherwise than make the further assumption that it has grown and must yet further grow. In what manner, then, has this growth been accomplished? What are the external signs of its successive stages, the marks of its gradual evolution? One, at least, must strike all who have surveyed, even with a careless eye, the course of human speculation—I mean the recurring process by which the explanations of explanatory formulas in terms of which mankind endeavor to comprehend the universe are formed, are shattered, and then in some new shape are formed again.

"It is not, as we sometimes represent it, by the steady addition of tier to tier that the fabric of knowledge uprises from its foundation. It is not by the mere accumulation of material, nor even by a plant-like development, that our beliefs grow less inadequate to the truths which they strive to represent. Rather are we like one who is perpetually engaged in altering some ancient dwelling in order to satisfy new-born needs. The ground plan of it is being perpetually modified. We build here; we pull down there. One part is kept in repair, another part is suffered to decay. And even those portions of the structure which may in themselves



appear quite unchanged, stand in such new relations to the rest, and are put to such different uses, that they would scarce be recognized by their original designers."

Applying this truth to our own searching for knowledge in our society work, does not the similarity of the conditions prevalent here with the general conditions in the building up of knowledge which the quotation describes, appeal to you?

Here we have represented an art and a science, which for fifty years has been built upon the sand. To-day things appear to us in a different light, the old structure is overthrown, and we attempt to build upon the solid rock of truth, only to find ourselves unproficient in the adaptation of our art to new conditions. There is the old foundation, the sand is easy for our feet, the rock is hard and forbidding. But even as we are becoming discouraged our neighbor, who has built upon the rock, comes to our assistance, and with helping hand and kindly word aids us in the new construction, whereby we once more assume the courage of confidence and the rewards of ability.

**A Tribute to  
the Old School.**

The attitude of this society toward the "old school," as it has been ungraciously styled, should be, and is, one of admiration and respect for their achievements in the past, and to all those of the older orthodontists who possess the requisite qualifications, we extend a hearty invitation to join our ranks, promising them that they will not be ostracised, but given the seats of honor, in recognition of their efforts to build up the science.

At the coronation of King Edward the military pageant included the troops from every quarter of the globe—the white troopers of the United Kingdom, the tall and brawny Scotch Highlander, the strong and rugged Canadians, the brown soldiers from far away India, and the black troops from Africa.

Coats and faces of varying colors were there represented, but they were all there for one purpose, to crown their king.

It did not mean that each regiment was not interested in its own country, its politics and its resources, nor that the Scotch Highlander did not enjoy the secret belief that the style of his trousers was much to be preferred to those of the Johnnie in the Queen's Own, but it did mean that upon one thing they were united, the love of their monarch, and to do him homage.

What matters it how varied, how crude, or how cultivated are our ideas as long as we are working for a common end, the advancement of our science and the betterment of our practice?

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Orthodontia as a progressive science has been, and is, going through the analytical and synthetical stages of modern reconstruction.

An analytical study of the science, from the standpoint of the laws of occlusion, articulation and development to-day has shifted the abiding place of progress from the mechanic to the diagnostician, from the empiric to the scientist; to-morrow, the mechanic and the empiric may again wear its mantle.

The reconstructive period of the Civil War was a difficult one for the statesmen of this country, but the North and the South were alike remembered in the efforts to restore harmony.

The period of reconstruction is now upon us, and the profession is looking to the American Society of Orthodontists, and similar societies, with a questioning eye. Will they give us the truth, will they be generous in their reconstruction of our old ideas of extraction, and diagnosis, and treatment from symptoms? Will they annihilate us if we dare to mention that we have done all our regulating with jackscrews, and still use them because we had not learned of anything better for the purpose?

Is a lifetime of devotion to the science, even though it be not adjusted to the modern view-point, to be violently thrust to earth, as of minor consequence?

If so, it is time that we laid aside our microscopes and look through the clear, human and common sense eyes given us by our Creator, see things in a natural light, and extend the right hand of fellowship and good will to our confreres, who may have been in some unknown way the foundation of our success.

Orthodontia is not an easy science. No human being yet has entirely mastered it. We would not be here to-day for interchange of thought if the vagaries and complications of diagnosis and treatment were not still punctuated with question marks in certain places in our minds.

Ever since the organization of the American Society of Orthodontists, I have been impressed, not only with the grandeur of its purpose and the earnestness of its members, but more than all that, with the broadness of its scope, as indicated by its name, American.

It is national in character, as is every other organization bearing this name, and as such, is open to membership to anyone possessing the requisite qualifications in this country.

Our constitution and by-laws dare not prohibit membership to anyone because his ideas may differ from those of the majority, or because he may have a hobby. One need not necessarily master the laws of occlusion to become a member.



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Although we as a body represent the "new school of orthodontia," it simply means that we recognize certain principles of progress which the other fellow has not had time nor opportunity to digest. To feed him on the left-overs is not going to aid his digestion nor build up his leanness of knowledge on the subject.

This society has much to be proud of in the work it has performed in the last six years, not only in the quality of its papers, its widespread influence, and in the advancement of orthodontia as a distinct specialty, but also in an awakening of the medical profession to a realization of the possibilities of orthodontia, especially the rhinologists, with whom the orthodontist comes into daily contact through reference of patients.

The very high degree of operative skill required to obtain results in treatment, such as have been exhibited by the members of this society, is a great credit to the organization, and shows an earnestness of purpose, and a zealous enthusiasm which exhibit an entire lack of pecuniary motive in its fulfillment.

The activity of its members in foreign countries has given birth to the European Orthodontia Society, the president of which is a member of this society.

Were I to make any suggestions at this time, they could only be along the general trend of thought and practice, the latest and best of which is annually presented to this society in its papers and clinics. Unlimited fields of research in orthodontia, and adjoining fields of knowledge bearing thereon, stretch out before the imagination of all of us, replete with grand and splendid possibilities.

There is always something of interest to present, or to be presented; there is always something new to be investigated at these meetings which will suffice to fill the programmes of future meetings ad infinitum.

New laws, new theories, new methods will come and go, and some will stay, for the good of the cause.

Francis Bacon says of innovations, "It is true that what is settled by custom, though it be not good, yet at least it is fit; and those things which have long gone together are, as it were, confederate within themselves; whereas new things piece not so well, but though they help by their utility, yet they trouble by their inconformity. This would be true if time stood still, which, contrariwise, moveth so round that a forward retention of custom is as turbulent a thing as an innovation; and they that reverence too much old things are but a scorn to the new. It were good, therefore, that men, in their innovations, would follow the example of time itself, which, indeed, innovateth greatly, but quietly and by degrees, scarce to be perceived. And, lastly, that the novelty, though

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it be not rejected, yet be held for a suspect, and, as the Scripture saith, that we make a stand upon the ancient way, and then look about us, that we discover what is the straight and right way, and so to walk in it."

### **Comparative Value of Materials for Construction of Appliances.**

And now to come to a very practical subject, the comparative value of materials for appliance construction. I wish to bring this up for general discussion, by the advancement of a few ideas, which may or may not be held in common by the majority of the members of the society, certain salient features of which I hope to be able to prove for the benefit of orthodontia of the future, and which will tend to further its progress and raise its standard.

I refer to the use of gold and platinum and their alloys for the construction of appliances as preferred to German silver.

That we may have a clear idea of the status of German silver as a material for appliances in orthodontia, I will quote the following paragraphs from the latest text books on orthodontia:

Dr. Guilford says concerning German silver:

**German Silver.** "This improperly named alloy, composed of copper, zinc and nickel, is frequently employed in the construction of regulating appliances, on account of its stiffness and inexpensiveness.

"While it may be regarded as a base compound, its baseness is of so high a grade that it may be used without fear of harm to the soft tissues or the general system.

"Professors Angle, Matteson and Jackson use it very largely in the construction of their appliances, and the author has made frequent use of it without ever noticing any deleterious effects."

Dr. Jackson says, speaking of the material for the construction of the partial clasps in his system: "Platinoid and German silver have been used extensively for this purpose, and have their advantages where soft solder is used, but preference is generally given to the precious metals, as they are less liable to oxidize.

"The spring clasp is made of any suitable metal, usually of spring gold, German silver, or platinoid (piano wire has been employed)."

Dr. E. H. Angle, in the 1907 edition of his work, has to say:

"Gold, silver, platinum, platinum gold, platinoid (so called), aluminum, and several of the baser metals and alloys, as brass, copper, aluminum, bronze, steel and iron, and also vulcanized rubber, may all be used in the

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construction of regulating appliances, and each possesses properties of more or less value; yet, after experimenting with all these, the author is thoroughly convinced that the material most nearly filling all requirements is nickel silver.

"Since its introduction for the manufacture of regulating appliances by the author some twenty years ago, it has largely supplanted all other metals for this purpose.

"The wearing of bands of this metal for three consecutive years, without detrimental change, has been noted by the author. In a small percentage of mouths, however, it is true that it does become discolored even to unsightliness.

"This fact has given rise to the only prejudice against the use of this metal that we know of, but this objection seems trivial in view of its many points of superiority. And, lastly, its inexpensiveness brings it again into sharp contrast with gold and platinum; yet we insist that it is its excellent qualities more than its inexpensiveness that makes it so preferable a metal for orthodontic purposes."

*"The oft repeated fallacy that gold is the one suitable metal for the construction of regulating appliances is rapidly passing, as it ought, for undoubtedly it has been a real hindrance to progress."*

Gentlemen, is it an accepted fact that the use of gold in the mouth is a real hindrance to progress?

Has the experience of the orthodontist of the last twenty years been such as to leave nothing further to be desired than German silver as a material for appliances?

Does German silver possess qualities such as strength, spring, high fusing point, malleability, hardness and softness, and greater rigidity in thin plate form, such as is used for molar clamp bands, than can be obtained in some of the noble metals?

It might be argued that the fact that all regulating appliances on the market are manufactured of German silver is sufficient answer to my question. I am willing to let this argument stand on its merits, without questioning the motive of the manufacturer.

We will say that the idea of the manufacturer is simply to supply an existing demand for German silver appliances in the profession, without any attempt to force it upon them by claims of superiority over gold or platinum.

Therefore, with these premises, is the field now open for original research along this line, and surely our minds are open to conviction.

A few years ago, in speaking of the wide range of qualities possessed by German silver to a goldsmith, he said to me: "Gold is a metal capable

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of alloying in so many different ways that it is possible to at least duplicate, if not excel, any of the qualities possessed by the alloy of German silver."

Since that time I have proven to my own satisfaction the truth of this statement, and from the results obtained by scientific experimentation, there is every reason to believe that the use of gold and platinum alloys for appliance construction will be the next advance in practice in orthodontia.

If it can be demonstrated that gold and platinum are more desirable for appliance construction than German silver, regardless of expense, should not this society be foremost in proclaiming it?

Alas, we are too late. Already a dental society of New York has the precedence in this respect, but there are further honors to be sought for in the adoption of the noble metals in the practice of the specialist and in the influence of his practice upon the profession in general.

It is time that this society took up this matter in earnest if they do not wish other societies to win away their laurels.

It is worthy of note that the foreign orthodontists who exhibited appliances at the International Dental Congress at St. Louis, in 1904, displayed *only gold appliances*, all American appliances being made of German silver.

### **Comparative Qualities of Metals.**

Let us examine somewhat closely, the comparative properties of gold and German silver in detail, in order that we may make logical conclusions concerning them.

To begin with, gold and platinum do not oxidize; German silver oxidizes in the air and in the mouth.

Pure gold and pure platinum are unaffected in color by heat; German silver oxidizes with sufficient heat.

Perhaps one of the most important properties possessed by platinum and gold alloy is that of retaining elasticity and hardness after heating to redness.

German silver becomes annealed in this process, losing elasticity and hardness, and rendering it unfit for use as expansion arches.

The expansion arch in a gold and platinum alloy can have hard, soldered attachments, such as hooks and spurs, without interfering with its temper and elasticity.

Attempting hard soldering to a German silver arch is to destroy the temper without which it is unfit for use in expansion.

The chemical reaction to acids and alkalies for gold and platinum alloys is zero, except for aqua regia.

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German silver is acted upon by most of the strong acids and alkalies, such as  $\text{H}_2\text{SO}_4$ ,  $\text{HNO}_3$ ,  $\text{HCL}$ , etc., and by such weaker acids as acetic. Iodin attacks it vigorously.  $\text{H}_2\text{O}_2$ ; 3 per cent. even, attacks it.

Potassium sulfocyanate, which is normally present in the saliva, and which it is thought renders the teeth immune to caries when present in sufficient quantity, very badly discolors it.

Pure platinum wire, and a wire consisting of an alloy of gold and silver, possess the softness and pliability of the annealed German silver wire with a low percentage of nickel, which is commonly used for retaining wire.

**Platinum.**

When a specially stiff wire is required for retention, iridio-platinum cannot be excelled in this quality by any other alloy, and for this purpose can often be used in as small a gauge wire as No. 19 Brown and Sharpe, a grade which the writer prefers for retention of deciduous arches in the shape of the lingual arch wire, and for labial spurs upon incisors and cuspids, as offering every advantage of efficiency, durability and esthetics.

Platinum and iridium alloys are less fusible, harder, more elastic, specifically heavier, and less readily attacked by aqua regia than platinum, these qualities increasing as the percentage of iridium increases.

**Iridio-Platinum.**

The ten per cent. alloy of platinum and iridium is claimed to be superior to any other solid as a material for standard measures of length and weight.

The International Metric Committee adopted this alloy for the construction of their standards when they met in Paris several years ago.

Gold is the most malleable of all the metals.

**Gold.**

Its hardness varies with its composition, and for purposes of appliance construction should be so alloyed that its fusing point will not be appreciably lowered, as with platinum, and for the specific purpose intended; *c. g.*, the expansion arch should be hard and elastic; tubes upon molar bands hard enough to resist the force of mastication, but not requiring the elasticity of the expansion arch. Nuts should be comparatively higher in carat of gold so as to render them easier to be threaded.

Gold unites with platinum in all proportions, forming grayish-yellow or grayish-white alloys.

The tenacity of gold is very greatly increased by admixture of platinum, while at the same time it is rendered more elastic.

For the parts of the molar clamp band, and the expansion arch, an alloy of gold and platinum is to be preferred to any other alloy of gold,

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principally because of the high fusing point of this combination, and therefore less liability to fusion in the blowpipe flame.

An alloy of gold, silver and copper, in the tube of the molar clamp band would be liable to partial fusion at least in the blowpipe flame during soldering operations, while the same tube in a platinous gold would be infusible in the ordinary blowpipe flame.

The fusing point of platinum is 1775 degrees Centigrade, of gold 1075 degrees Centigrade. An alloy composed of 90 per cent. gold and 10 per cent. platinum, fuses at a temperature of 1130 degrees Centigrade, which is very significant, proving to us that *pure gold* may be used as a *solder* upon this alloy without danger of fusing the alloy, since the fusing point of the alloy is 55 degrees higher than the fusing point of gold.

The samples of wire and plate which are being exhibited are German silver and gold, and platinum alloys, of varying degrees of hardness and softness, elasticity, etc., from the piece of soft German silver wire, and its equally soft counterparts in the noble metals, the gold and silver alloy and the pure platinum, to the hard and elastic gold and platinum alloys for expansion arches and traction screws, and the still stiffer iridio-platinum wire for retention.

By comparing these wires and plates, it will be observed that there is nothing left to be desired as far as gradation of elastic qualities is concerned in the gold and platinum alloys.

Three sizes of arches in gold and platinum and the molar clamp in gold and iridio-platinum are exhibited on another card.

The iridio-platinum plate exhibited on the same card has plenty of edge strength in gauges even thinner than No. 36 B. and S. gauge for molar clamp bands, and for plain bands can be used as thin as No. 39 B. and S. with success.

Pure platinum for retaining bands is often of service, especially for the deciduous teeth.

The gold alloys in plate shown on the card are also of value in plain bands, and for retention bands where preferred for various reasons.

Gold and platinum are both more pliable than German silver, and can be more accurately burnished and adapted to tooth surfaces.

<b>Objections to German Silver.</b>	After ten years' use of German silver, even triple plated with gold, I can honestly say that I am disappointed in it as an ideal material for the construction of appliances and for several reasons.
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In the first place, we will suppose that the only objection to its use is its "discoloration even to unsightliness," and ask the question, "Is this a frequent occurrence?" and if so, is it serious enough to warrant the use of gold and platinum in its stead?

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I do not hesitate to declare that in at least seventy-five per cent. of our cases German silver will discolor to the state of unsightliness, and in my opinion this alone is enough of a disadvantage to condemn it as an ideal material for the purpose used.

How many times is the request made by our patients that the arches and bands be repolished, the patient often believing that the gilded surface is restored by repolishing.

How many of them also believe that the material of which their appliances are constructed is gold, and with what embarrassment the acknowledgment is forced from us that it is German silver gold plated, and that the plating is slightly worn off.

A retaining band of German silver was removed from one of the writer's patients some years ago, and sent to the assay office at Washington to be melted up for the gold it contained, and the surprise of the people when the report of the assay office came in brought forth a letter of inquiry regarding the matter, which was at least embarrassing.

In a very careful examination of German silver appliances in the mouths of my own patients for a number of years, I have found that *discoloration* is not the worst objection to their use, a large percentage of them showing surface corrosion, indicating chemical action to a greater or lesser extent.

I will pass around three specimens from three different mouths for your inspection with the magnifying glass.

The surfaces of these bands are not only corroded, but the entire thickness of the band is perforated by the destructive action of the fluids of the mouth.

The pits formed in the surface of the arches, bands and tubes, afford lodgment and breeding places for bacteria, which are impossible to remove with all the hygienic care possible.

In regard to the actual chemical reactions which take place during these corrosions, I am unable at present to state any facts. This will remain for future experimental work or analysis by the chemist. There is no doubt, however, that the acid or alkaline reactions in the mouth at various times are sufficiently strong to produce such corrosions, inasmuch as German silver is not impervious to the attacks of almost any of them.

One authority declares that German silver becomes coated with a coat of verdigris when placed in vinegar, a poisonous combination of the basic acetates of copper being formed.

Vinegar is often used with the food as a relish in sufficient quantity so that appliances could be affected.

But suppose that these acetates and oxids which form are not detrimental to health, as would seem evident only from lack of statistics on

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this point, and that all bands are cemented upon teeth, so that food can not collect underneath them and be a medium for the growth of harmful bacteria to the enamel. Is there any possible deleterious action through the wearing of German silver appliances? Yes, there is one more, serious enough to warrant its discontinuance, and that is the deep metallic stain to the enamel surfaces of the teeth where the arch rests upon them, below and above the edges of all bands, and upon the interproximal surfaces of teeth which are ligated with brass ligatures.

This stain is so deep and of such composition that the strongest bleaching agents which can be used in the mouth with impunity fail to entirely remove it.

Or, again, when the stain appears to be removed, the enamel itself is seen to be injured in a manner similar to the white decay often seen upon children's teeth.

Prophylaxis demands more of us to-day than it did twenty years ago. Hygiene of the mouth is a subject that is taking up the efforts of the best minds in the profession toward the establishment of a higher and better standard.

### **Noble Metals Recommended.**

The adoption of the all-gold appliance belongs to the same advance in practice that sterilization of instruments and oral prophylaxis have already set the standard, and to their edicts the dentist of the twentieth century must conform.

I do not claim to be the first investigator into the possibilities of gold and platinum for appliance construction. Other members of the society have been working faithfully and with good results along the same line.

One of the members of this society told me that he used nothing but gold and platinum in the mouth, that the cost was a minor consideration in view of the fact that the cost of the material in a molar clamp band in gold was no more than the price of the same article in German silver.

I happened in to the office of another member of the society and he showed me a mammoth sheet of iridio-platinum worth in the neighborhood of \$150. On inquiry, I learned that he intended to start in with the use of the noble metals for his appliances.

I must insist that the expense of the all-gold appliance is not to be considered in view of its many other advantages. For a small consideration the gold appliances may be remelted and made over into wire or plate for use again as arches or bands, to say nothing of its money value as scrap, which in the long run will prove rather more of a profitable investment than an expenditure.



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The all-gold appliance has come to stay, and it only remains for the appliance manufacturers to fall into line with a demand which will soon prevail universally for the advancement of the standard of orthodontia and the benefit of humanity.

Many of you have been using gold and platinum alloys for retaining appliances for some years with great satisfaction. Does it not behoove you to get a step farther and adopt the all-gold standard for the entire apparatus?

Looking ahead into the near future, I can see the foremost specialists in the country reaping the rewards of this advance step in the giving of better service to the patient, and receiving better pecuniary compensation therefor, as well as the satisfaction that there is nothing left undone in the furtherance of his art which science teaches is of practical and enduring value.

I can prophesy also a worldwide controversy over this subject somewhat similar to the gold vs. amalgam, and gold vs. vulcanite controversies, which aroused so much discussion in the dental profession at different periods of its history, but with this difference, and that is, while these other questions have never been fully decided one way or the other, there could only be one answer to the question, "Which is the most preferable and practical metal for the construction of regulating appliances, the noble or the base metal?" and that answer will be *gold*.





## History of the New Jersey State Dental Society.

By ALPHONSO IRWIN, D.D.S.

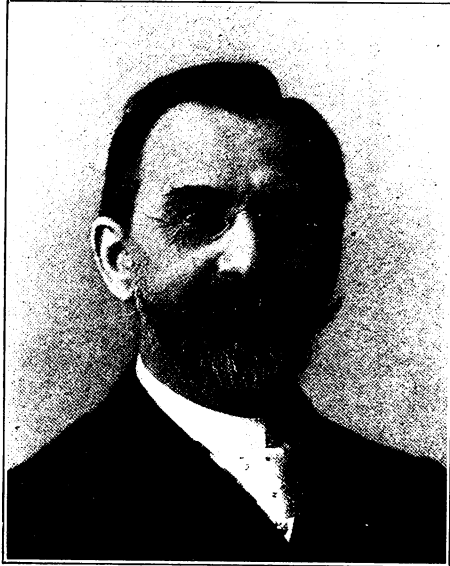
*Read before the New Jersey State Dental Society, July 18, 1897.*

If it be true that dentistry is the youngest of the professions, then it is equally true that it has developed the most rapidly of all the professions. For although it was originally limited to the simple operation of the extraction of teeth, it has expanded with marvelous rapidity into mechanical and operative dentistry, orthodontia, oral surgery, and veterinary dentistry; including operations upon the most important part of the body, and complicated directly or indirectly with the most vital functions of animal life—in extreme cases, life or death hanging upon the success or failure of a dental operation.

**The Professional Drone.** The dentist who graduated from college in 1870, skilled in all the branches of instruction prevailing at that time (unless he received post-graduate training), like Rip Van Winkle, would awaken in a score or more of years, rub his eyes and gasp with astonishment at the changes which had occurred in the practice of dentistry. Many dentists, of the Rip Van Winkle class, have become stranded on the shores of innocuous desuetude while others have been slightly swallowed up in the waves of oblivion, but they were not members of the New Jersey State Dental Society.

In the State of New Jersey there have always been men who have pursued the vocation of dentistry because they loved it. There is another class of men who are dentists because they are determined to get out of it all that there is in it financially. A combination of these

two classes with other ambitious dentists formed a virile body of men who were resolved to keep abreast of the age, remain in touch with mankind, and become masters of every improvement in the practice of dentistry, at any cost of time, labor or expense. This was the situation in the New Jersey State Dental Society in 1882. There were only ninety-six, including honorary members, at this time, but with few ex-



DR. C. F. W. BODECKER

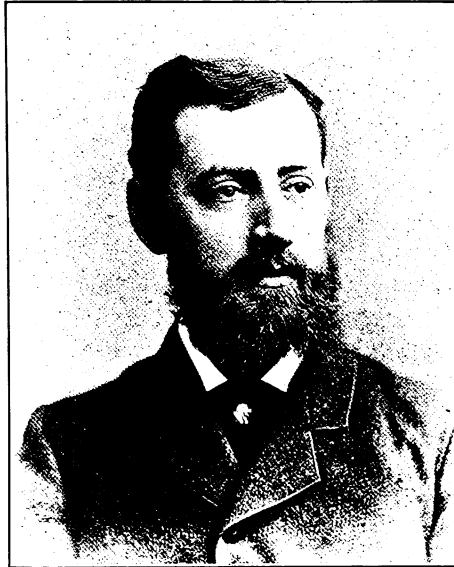
ceptions they were men of ability, and accomplished skilful feats which we recall with pride, even in this wonderful twentieth century.

The leading events which occurred from 1870 to 1882, or for a period of twelve years, have already been reviewed in the history of the New Jersey State Dental Society. The prophesy of failure was disproved. Definite objects were accomplished in the dental profession of the State; concerted action was established, a degree of scientific precision was developed in thought, statement and practice; dental legislation was inaugurated; the literary talent of the profession was aroused; fraternity was cultivated; latent forces slumbering in the bosoms of dentists were awakened and utilized for the welfare of the profession. While certain principles of mechanics, constituting the foundation of dentistry, were

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exploited down to the most infinitesimal minutæ of detail before the conventions; these in turn were followed by their legitimate successor, operative dentistry, at a series of meetings, where the technique of operating was the most conspicuous feature, and reached its climax while we were fascinated by cohesive gold, the electric mallet and the gold crown. These displays of skill dazzled our eyes at many annual



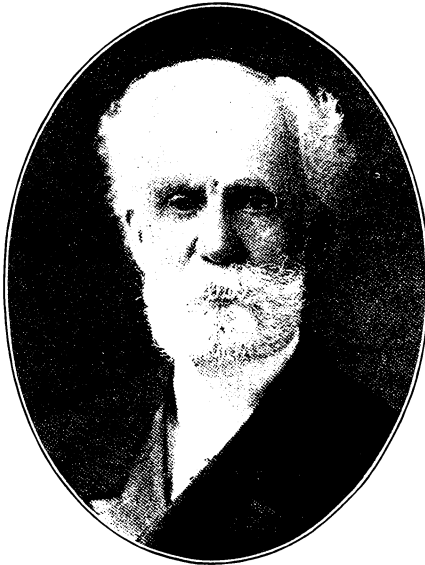
DR. JAS. G. PALMER  
President 1883

meetings, while passing through the golden era of youth previously referred to in 1882.

Thus, building step by step upon a sure foundation, with each forward movement logically and firmly taken in the process of development, the New Jersey State Dental Society grew and flourished until now we enter upon the era which might be termed the surgical period. When we refer to the subject of replantation, transplantation and implantation, let none of our jocose friends suppose this was an agricultural period, because the terms replant, transplant and implant are used in a surgical sense, the society during all these years refused to vegetate for a single minute.

**The Thirteenth  
Annual Convention,  
1883.**

At the Thirteenth Annual Meeting in Asbury Park, Jas. C. Palmer presided. Thirteen applicants for membership were received, including B. F. Luckey, who became a stalwart worker, a trenchant debater and an adviser of an aggressive character. Dr. Luckey, after filling various offices, was elected chief executive and president, and later a member of the Board of Dental



DR. G. A. MILLS

Examiners. We also elected to membership J. L. Carter (the opposite of Dr. Luckey in many respects), who was an earnest worker and rendered efficient service in a quiet, unostentatious way for many years, besides serving as president in a most capable manner. As dentists, we are therefore compelled to discard the ancient superstition that thirteen is an unlucky number, for the Thirteenth Annual Convention was a "lucky" affair.

Secretary Meeker, as prosecutor, reported that twelve illegal practitioners were called to account. Three discontinued practice; three prosecutions reached an indefinite result; five complied with the law, and one left the state. The death of Marshall B. Webb was announced and an appropriate "Memorial" was drawn up. A star of the first magnitude (among a galaxy of famous men), which had shed its



## ITEMS OF INTEREST

rays for the glory and enlightenment of the dental profession, prematurely passed away when Dr. Marshall B. Webb entered another and better sphere.

The movement inaugurated "To secure unity of effort, as well as to establish a uniform standard of examinations, and a similarity of the laws in the States where board of examiners and dental colleges exist," was endorsed and its operation urged by the New Jersey State Society at this convention.

Eminent visitors from a distance were formally introduced, such as Drs. C. W. F. Bodecker, A. L. Northrop, W. W. Evans, of Washington, and T. S. Waters, of Baltimore; J. A. Robison, of Michigan; Drs. William A. Carr, George A. Mills and Charles E. Francis, of New York.

A paper from Dr. Henry S. Chase, of St. Louis, entitled "Filling Teeth," was read by C. W. Malony, followed by another on a similar subject by Dr. J. Hayhurst, which were discussed by Drs. C. F. Bodecker, W. H. Atkinson, S. C. G. Watkins, J. A. Osmun and M. L. Rhein.

Dr. Hayhurst was appointed delegate to the meeting of the National Association of Dental Examiners, which was to meet this year at Niagara Falls, and New Jersey began to participate actively in the national affairs from this time.

Three applicants passed the Board of Examiners. One hundred and forty dentists were present. The secretary was authorized to appoint and make out the credentials of the delegates to the various dental associations.

**Rotation in Office.** The officers, members of the Executive Committee and Board of Dental Examiners were only elected after a long contest, there being so many nominations for officers and such an active interest in the management of the organization this year. In later years this confusion has been obviated by adopting the method known as "rotation in office," which consists in appointing the fittest and most eligible men on all committees, an experienced as well as available candidate being promoted each year until he is finally elected president.

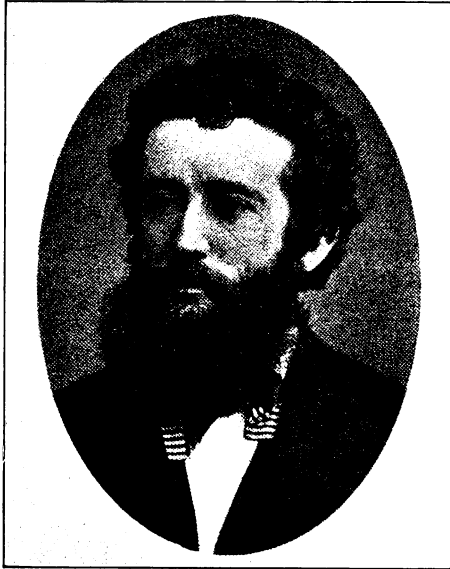
**The New Constitution of 1883.** Under the new constitution the vice-president became a member and chairman of the Executive Committee. This rule has since been continued in force and has been found to promote the welfare of the organization to a greater degree than any other plan which has ever been tried.

Dr. J. Allen Osmun read a paper on "The Legal and Moral Responsibility of Dentists in the Administration of Nitrous Oxid Gas,"

which displayed keen insight into the practical phase of the subject as well as careful thought, accurate observation, logical discrimination and wide experience. This thesis is more valuable to the general practitioner of dentistry for reference than the ordinary text book upon this subject.

Dr. E. H. Bunting, Sr., read a paper on "Esthetic Dentistry."

Dr. George C. Brown presented "A Resume of the Different Prepa-



DR. J. H. MC QUILLEN

rations of Gold Used for Filling Teeth," which was a masterly historic production and aroused a lengthy debate among those present.

Dr. G. Carleton Brown graphically described "The Curse of Modern Civilization (*i. e.*, white flour) and its Disastrous Effect Upon the Teeth as Well as the Other Parts of the Human Body, by Failing to Supply Needed Sustenance."

Dr. Bonwill related his experience with "Anesthesia from Rapid Inhalation," and produced a remarkable plaster cast specimen of non-development of the incisor and cuspids of both the upper and lower jaw. He also exhibited his new handpiece, dental engine, mechanical mallet and porcelain crowns, all of which were marvels of ingenuity and valuable acquisitions in office practice at this period.



## ITEMS OF INTEREST

### **Clinics.**

Clinics were given by Dr. Buttner illustrating his "Method of Crowning Roots." Drs. E. Siegle, C. A. Timme and W. W. Evens gave clinics. Drs. Rynear and William H. Dibble made very interesting demonstrations, and Dr. G. P. Hodge showed his new handpiece for the dental engine, which, besides possessing the advantage of a universal chuck, has been unsurpassed for durability and usefulness, when subjected to the most severe tests.

### **Exhibits.**

Seven exhibits were made, and the year 1883 closed as the convention of exhibits, these being a new phase of evolution in the society. Verily do mighty oaks from little acorns grow.

### **The Fourteenth Annual Convention, 1884.**

Dr. E. H. Bunting, Sr., presided over the fourteenth annual convention at Asbury Park, in the year 1884.

The president announced that the State law had been amended so that no person hereafter could practice dentistry in this State unless he had a diploma from a reputable dental college. He explained that New Jersey was the only State which did not recognize a diploma from a foreign country at that time.

Papers were read entitled "Pulpless Teeth," by Dr. S. Baldwin; "Devitalized Teeth, Their Preservation," by Dr. William E. Mitchell. "The Bromids in Dentistry" was the subject of a paper read by Dr. R. M. Sanger, which it is almost needless to add did not put the dentists to sleep, but on the contrary excited pertinent remarks by sprightly speakers. "The Use of Amalgam," by Dr. S. C. G. Watkins, a carefully prepared thesis, was accorded marked attention by various experienced speakers.

The discussions on these papers as a whole were the most voluminous ever indulged in, and the sessions were lengthened correspondingly in keeping with the interest manifested upon this occasion.

The clinics and exhibitions given by Drs. W. G. A. Bonwill, Parmley Brown, H. A. Parr, Howe and Ambler Tees, were in keeping with the high standard of excellence manifested by the papers.

The summary of the prosecutor's report for the year showed that five cases were prosecuted, three dentists were arrested and three law suits were instituted. In one case the jury defeated the ends of justice in spite of the evidence and the charge of the judge. One candidate for registration passed his examination, one promised to comply with the law, and two prosecutions came to an indefinite conclusion.

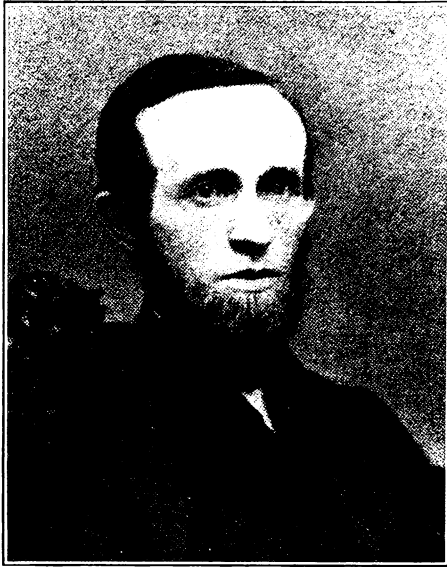
### **Orthodontia.**

Drs. George C. and G. Carleton Brown read essays on "The Use of the Patrick Regulators," which were illustrated by models and diagrams.



These were the first papers recorded upon the subject of orthodontia, and it seemed to strike the members favorably, for fourteen discussed it in a lively manner.

Dr. J. Hayhurst presented a glowing report of his visit to the American Dental Association at Niagara Falls, and predicted a bright future for this aspirant for national recognition and consolidation of the dental profession of America.



DR. J. W. SCARBOROUGH  
President 1885

Dr. J. G. Palmer read a paper entitled "Higher Attainments," in which the author himself set a striking example of the doctrines he advocated by striving to reach "higher attainments" in his own career. Dr. Carl Heitzman lectured upon the subject of the "Teeth as Living Organs" in such an impressive manner that many of his ideas upon the subject are still remembered.

**The Fifteenth  
Annual Convention.  
1885.**

The fifteenth annual session was opened by the president, J. W. Scarborough, July 15, 1885, in Asbury Park. Progress was the keynote of the convention, as enunciated by Dr. Scarborough in a thoughtfully prepared address.

It was announced that the International Medical Congress, to be held in Washington in 1887, contained a section on oral and dental

## ITEMS OF INTEREST

surgery which would be accessible to the eligible dentist who wished to attend and those who possessed suitable qualifications were invited to join it.

Papers were read entitled: "Advantages of Narrow Surface Cohesion Dental Plates," by Dr. Joseph Speyer; "Pathology of the Tooth Pulp," by Dr. W. H. Atkinson; "Dental History," by Dr. J. Hayhurst; "Electricity and Its Application to Dentistry," by Dr. George C. Brown.



DR. WM. P. RICHARDS  
Vice-President 1885

Dr. George Brown introduced the Backus water motor to the notice of the profession in 1875, and also called their attention to an electric motor which could be used for running the dental engine and lathe at this meeting ten years later.

An interesting address on "A Factor in Tooth Preservation" was delivered by Dr. C. N. Peirce, whose personality and rare ability as a teacher and lecturer were highly appreciated by our society. The discussions were participated in by over fourteen men, including Drs. W. H. Atkinson, Frank Abbott, C. N. Peirce, M. L. Rhein and W. G. A. Bonwill. Dr. Bonwill related his version of the history of the electric mallet in a very spicy address. Clinics were given by Drs. C. A. Timme, A. R. Easton, G. Carleton Brown, F. E. Lee, E. R. De Wolfe, and others.

The National Dental Association was invited to convene in 1885 at Asbury Park, N. J.

Dr. W. G. A. Bonwill explained his "Method of Articulating Dentures" and the principles underlying his anatomical articulator. The principles evolved in this articulator were a close imitation of nature's movements as exhibited by the mandible of a human being. The Bonwill engine was also constructed so that all movements of the arm and



DR. W. PINNEY  
President 1886

handpiece copied the most flexible turns of the human arm and wrist. It is a significant fact that all classes of inventors of all ages have been compelled to borrow their ideas from the Divine Architect.

Dr. William Price Richards, as vice-president of the society, was entitled to the honor of election as president, but he magnanimously withdrew his candidacy in favor of his friend Dr. Worthington Pinney, who was elected president in 1885. There is no member who has worked harder nor displayed more zeal for the welfare of the New Jersey State Dental Society than William Price Richards, and we gladly welcome this opportunity to refer to services innumerable, unstinted and unselfishly rendered to the organization. Drs. William P. Richards and Worthington Pinney, who thus afford us an example of the Damon and Pythias

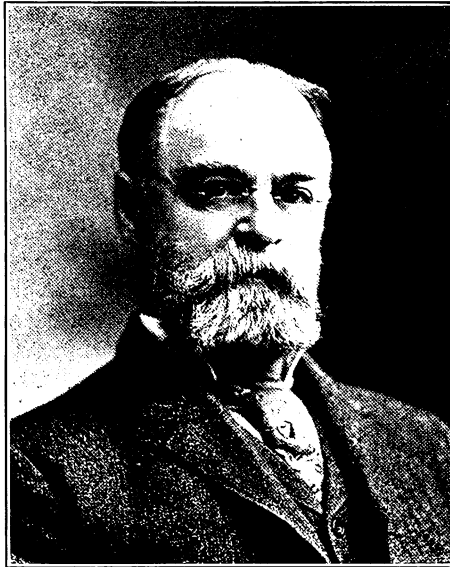
## ITEMS OF INTEREST

type of friendship in modern times, and in professional life where contests are the rule and self-abnegation is the exception, are worthy of imitation by even the most aspiring dentist in the society.

**The Sixteenth  
Annual Convention,  
1886.**

The sixteenth annual meeting assembled in the Coleman House at Asbury Park, Dr. Worthington Pinney presiding, in July, 1886.

The president announced the presence of Dr. William Herbst, of Bremen, Germany, upon invita-



DR. A. R. EATON  
President 1887

tion, to give clinics upon the "Herbst Rotary Method of Inserting Gold Fillings."

Papers were read on a "Modified Interdental Splint," by Dr. William Carr; "Bridge Work," by Dr. Starr; "The Properties and Qualities of the Different Makes of Gold Used for Filling Teeth," by Dr. C. A. Timme, which was a revelation upon the subject that opened wide the eyes of the profession; "Some Thoughts on the Selection of Filling Material," by Dr. J. G. Palmer; "Professional Courtesies," by Dr. Charles E. Francis; "Bridge and Gold Crown Work," by Dr. C. W. F. Holbrook, whose skill in this line of work has often aroused much admiration.

An address upon "The Pan and Pin Process for Applying Porcelain Teeth to the Roots of the Front Teeth," was made by Dr. M. Ryneer.

**Clinics.**

The clinics included the Herbst method of filling teeth by rotary motion, lining cavities with gold and filling with amalgam, by Dr. William Herbst. Dr. Herbst was the lion of the hour, and right well did he conduct himself upon the occasion. His clinics were crowded and his remarks were listened to with the closest attention.

**Dr. William Herbst's  
Banquet.**

Tuesday evening, July 22, a brilliant banquet was given to Dr. Herbst at the Coleman House, which attracted a large assemblage of distinguished men from different States, which was presided over by Dr. B. F. Luckey. Toasts were responded to by Dr. William Herbst and leading representatives of American dentistry. The "Hornets" had a good time, as many of them can vividly recall at the present day.

The introduction of the Herbst method of filling teeth and the royal reception accorded to Dr. Herbst was a master stroke of scientific enterprise, and in conjunction with other influences instituted for the betterment of the dental profession, proclaimed our society to be worthy of international recognition.

**The Seventeenth  
Annual Convention.  
1887.**

Dr. A. R. Eaton presided over the seventeenth annual convention at Asbury Park. A new departure was tried, which consisted in the Executive Committee selecting beforehand the subjects to come up before the meeting. The appointment of three committees on operative and prosthetic dentistry and dental materia medica was recommended by the president.

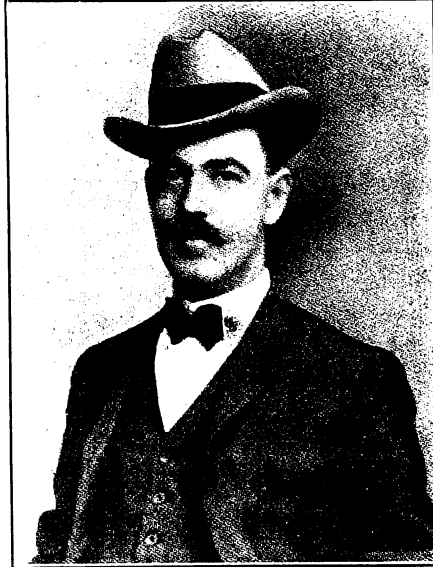
The society was invited to decide whether dentistry is a specialty of medicine. The president thought it was an independent profession, and wanted New Jersey to lead other societies in this country by committing itself on this point. New Jersey, however, coyly refused to declare herself.

The president referred to the American Medical Association, admitting as members all graduates of dental colleges, requiring professional study equal to the best class of medical colleges.

The society was invited to attend the meeting of the Southern Dental Convention at the Hygeia Hotel, Old Point Comfort, Va., in 1887. This convention was a union meeting of the N. A. D. E., the Southern Dental Society and the Virginia State Dental Society. Dr. C. S. Stockton (the Demosthenes of the dental profession) achieved national renown for himself and the New Jersey State Dental Society by his eloquent inpromptu response to the "Address of Welcome," in behalf of the North, at this union convention, which comprised a large assemblage of prominent people from the North, South, East and West.

## ITEMS OF INTEREST

Papers were read on "Porcelain Bridge Work," by Dr. E. Parmley Brown and by F. M. Odell. "The Treatment of Pulpless Teeth" was outlined by Dr. B. F. Luckey in a simple but effective manner and discussed freely by Drs. Frank Abbott, S. C. G. Watkins, Charles S. Stockton and J. Hayhurst. Clinics were given on "Crown Work," by Drs. Evans and Parr; on "Aluminum Plates," by Dr. Carrol; on "Root Caping," by Dr. J. A. Morey.



DR. G. CARLTON BROWN  
President 1888

The physiological effects and clinical value of "A Local Anesthetic" (stenocarpine) was explained by Dr. W. H. Mitchell.

Prof. Frank Abbott, M.D., of New York, delivered a most edifying lecture upon the subject of "The Treatment of Children's Teeth." Dr. G. Carleton Brown read an essay upon "Dietetics."

Mr. Fish, of Newark, upon personal application, secured the scholarship in the University of Maryland. The seventeenth annual meeting marked the advent of local anesthetics in the practice of dentistry on a large scale.

President G. Carleton Brown opened the convention in the West End Hotel, at Asbury Park, in 1888.

Dr. Watkins reported that the Herbst rotary method of filling teeth with gold had served as a

**The Eighteenth  
Annual Convention,  
1888.**

check upon the extremists in malleting, which had formerly been excessively practiced by some operators, to the intense relief of patients.

The president in his address spoke touchingly upon the death of Dr. J. W. Scarborough, reminding the members of the many years of extraordinary interest, devoted attention and conscientious service which he had rendered to the society. Appropriate action was taken in regard to this sad event, and suitable resolutions forwarded to the family and recorded in the minutes. The programme this year included eleven papers and twenty clinics, which was the largest and best programme ever presented by any State dental society up to this time, according to the verdict of those best qualified to judge.

A paper on "Homeopathic Therapeutics in Dental Pathology" was read by Dr. W. Irving Thayer, which presented this subject in its most favorable light. Dr. J. Hayhurst concluded his series of papers upon the "History of Dentistry." Dr. R. Ottolengui described the "Application of the Logan Crown" in detail, which was illustrated by diagrams.

Dr. J. W. Canady read a paper upon the "Combination of Tin and Gold," while Dr. J. P. Codman read a thesis upon "Enforced Climate and Diet as Affecting the Teeth." A lantern exhibition on "Biology" and a lecture, by W. Xavier Sudduth, was presented Thursday evening. The subject of "Professional Patents" was adroitly dissected by B. Holly Smith, and "Root Canal Preparation and Filling for Artificial Substitutes" was considered by Louis Ottofy in a paper which was read by Dr. C. S. Stockton, in the absence of Dr. Ottofy.

**Implantation.** The subject of "Implantation" was ably handled in separate essays by Drs. J. L. Curtis and G. C. Smith. The members of the society were inoculated with the implantation fever, and henceforth they became a favorable media for the growth of implantation cultures.

**Colleges, Three Years' Course.** A resolution requesting the colleges to require a three-year course of study from students was passed.

Brilliant clinics were presented, including a fascinating operation in "implantation," by Prof. E. C. Kirk, M.D., who successfully implanted an upper incisor without the aid of an anesthetic. A gold crown was built up with cohesive gold, using the T. S. Waters' electric mallet, by Dr. T. S. Waters.

An operation consisting of "Building up Crowns with Gold, Platinum and Iridium," was performed by Dr. Charles F. Wheeler, and a "Gold Crown was Built up with Cohesive Gold," using the electric mallet, by Dr. William B. Finney, requiring an eighth of an ounce of gold to complete it. The "Implantation of a Second Inferior Molar" was

## ITEMS OF INTEREST

performed (a twenty-five per cent. cocain solution being used as a local anesthetic by Dr. G. L. Curtis. Attractive table demonstrations were made by Drs. C. A. Timme and S. C. G. Watkins.

**The Nineteenth  
Annual Convention,  
1889.**

Dr. H. A. Hull presided in 1889 in the West End Hotel, Rev. Dr. Maddox offering the invocation.

The president read his annual address, which contained many felicitous remarks and pungent observations upon the various points of interest.



DR. HENRY A. HULL  
President 1889

The voluminous programme, eminent essayists and clinical instructors were eulogized and the officials most active in securing them praised for their good work.

Especial attention was directed to the unusually elaborate and complete exhibits. The papers read covered a wider field than usual and were very numerous.

These papers were discussed by Drs. Watkins, Charles S. Stockton, L. Ashley Faight, Charles A. Meeker and E. T. Darby.

Five dentists were elected to membership.

Appropriate resolutions were passed in regard to the death of Drs. N. T. Jenks, S. D. Eggert and T. L. Cook.



**The Dental  
Protective Association.**

The object of the Dental Protective Association of the United States was presented by J. N. Crouse and endorsed by the society after considerable discussion, pro and con.

An assessment of \$4.00 per member was made to defray the cost of publishing the minutes of the first five years of the society's existence. The *International Dental Journal* was made the official organ of the society for one year.

Dr. B. F. Luckey read the first report recorded on dental medicine, which in itself is a most intelligent and complete guide upon the subject, and one to which the dental student can refer with profit.

Dr. M. L. Rhein read a scientific essay upon "Chlorid of Ethyl," which was discussed by Prof. Charles Mayer and others.

Dr. J. Marion Edwards described in detail "Extensive Removable Bridge Work," which was discussed by Dr. Parmley Brown and other dentists present. Dr. William H. Dwinelle ably handled the topic of "The Treatment of the Teeth in Pregnancy," while Prof. E. T. Darby introduced the ensuing discussion. Dr. George S. Allen read an essay upon pyorrhea alveolaria, which was illustrated by the stereopticon and discussed by Dr. James Trueman.

Dr. R. C. Newton read a remarkably able paper, principally characterized by strong common sense, upon the subject of "The Teeth as a Factor in Diagnosis." Dr. Newton treated the topic from the medical aspect.

Prof. Charles Mayer discussed in an ideal scientific paper "Chemical Dentistry." Dr. S. C. Spooner described the process of "Carving Teeth and Shrinking the Gum to Fit." Julian W. Russel presented a paper upon "Copper Amalgam." W. Xavier Sudduth, in an illustrate stereopticon lecture, discoursed upon "The Individuality of the Biological Cell." Dr. Carl Heitzman also discussed this subject, and as he and Dr. Sudduth held opposite views, the debate was caustic enough to suit the most combative mind.

**Clinics.**

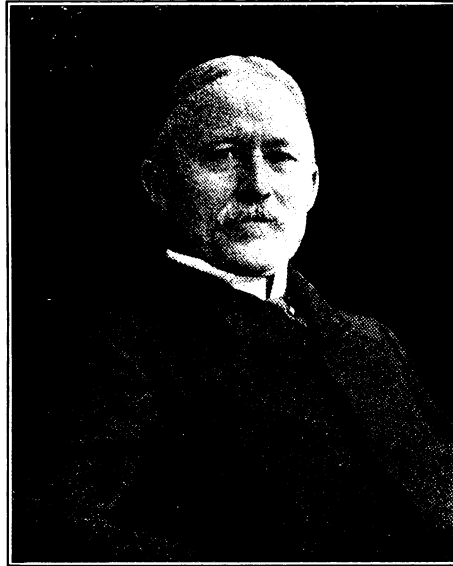
Clinics were given by Dr. W. H. Pomeroy on "Condensing Gold with the Pomeroy Engine Mallet and Soft Gold without Annealing, Using Points"; a root and crown were filled with aluminum pin and foil by Dr. C. Carroll. Dr. J. W. Canady demonstrated "Filling a Left Superior Second Molar with Combination Tin and Gold Foil," by selecting a cavity in a superior central incisor and using the Herbst method. Dr. Reading inserted "A Filling with Crystal Gold," the time consumed being five minutes. Dr. J. Marion Edwards illustrated the process of "Gold Filling, Using Hand Pressure."

## ITEMS OF INTEREST

Dr. Kimball showed how "Cement Lining of Cavities" should be made. Dr. E. J. King gave a clinic upon a "Crown and Bridge Piece to Correct Deformity Caused by the Removal of a Tumor."

### Inlays.

Dr. F. T. Van Wort showed how "Contour Fillings Could be Made out of the Mouth and then Inserted," being secured in position with cement.



DR. S. C. G. WATKINS  
President 1890

### The Twentieth Annual Convention, 1890.

The twentieth annual meeting was called to order in the Coleman House, in 1890, by President S. C. G. Watkins. Nine applications for membership were received.

Amendments to the constitution and by-laws were made to correspond to the new State law. This law was a step in advance, and the most satisfactory dental law, with three exceptions, in any of the States at that time. Part of this law is still in force. The State Examining Board was reestablished and dentists were required to register.

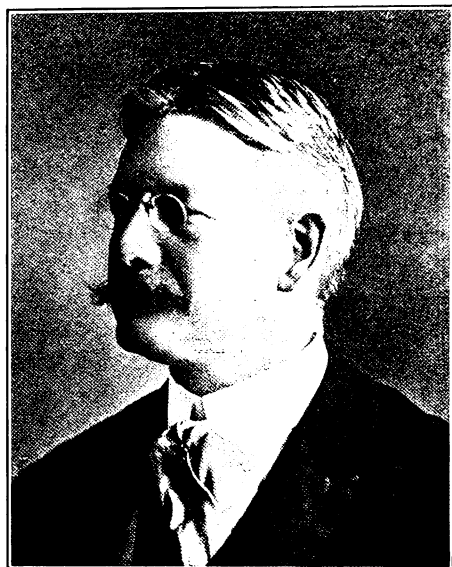
### A Three Years' College Course.

The president's annual address recommended that the colleges should be urged to extend their time to a three years' course of seven months each. Also that the State Examining Board should be

empowered to say what colleges should be deemed "reputable." The new law was highly commended upon all sides.

Essays were read entitled: "From Another Standpoint," by Dr. J. A. Osmun; "Erosion," by Dr. William H. Trueman; "Acids and Alkalies-Acidity," by Prof. Charles Mayer.

"Aneurismal Tumor of the Right Alveolar Process and Vault of the Mouth Treated by Injection" was the topic of an admirable paper



DR. GEO. E. ADAMS  
President 1891

by John S. Marshall, M.D. "The Therapeutic Value of Massage Treatment in Dental Pathology" was a novel paper presented by Dr. Rehfuß.

**Prophylaxis.** "Prophylaxis in the Field of the Dental Surgeon" was adroitly presented by Dr. Charles B. Atkinson.

The clinics were given by Drs. L. H. Warner, R. M. Sanger, E. X. Saylor, W. P. Richards, L. A. Faught and Dr. O. Adelberg.

Eleven exhibits were displayed, which was a slight increase over the number present in former years.

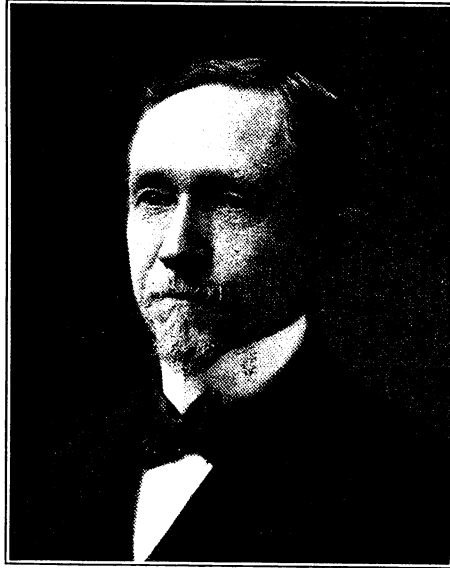
**Invitation to the Pennsylvania Dental Society.** The State Dental Society of Pennsylvania was invited to meet with this society in session at the next annual meeting in July, 1891, at Asbury Park, N. J.

## ITEMS OF INTEREST

Dr. Hayhurst was transferred from the active to the honorary membership. The society appointed a committee to arrange for celebrating the anniversary of the society upon reaching its majority, or twenty-first year, in 1891.

### **The Twenty-first Annual Convention, 1891.**

President George E. Adams officiated at the twenty-first annual meeting, Rev. John Handley offering prayer at the opening session. Eleven exhibitors were present, and the proceeds from exhibits amounted to ninety (\$90.00) dollars.



DR. WM. H. TRUEMAN

### **World's Columbian Dental Meeting, 1893.**

A motion was passed approving the World's Columbian dental meeting in Chicago, 1893. Suitable resolutions were drafted relative to the death of Dr. W. H. Atkinson and a "memorial" committee appointed. The society has never been able to fill the void created by the demise of Dr. William H. Atkinson, "The Father of Modern Operative Dentistry," who so magnificently supplied inspiration, enthusiasm and tone to so many of our meetings. Resolutions were also passed in regard to the death of Dr. J. W. White.

The Pennsylvania State Dental Society invited the New Jersey Dental Society to convene at Cresson Springs, in Pennsylvania, in 1892, through Dr. L. Ashley Faught. This invitation was accepted.

Five dentists were elected to membership, Drs. F. E. Riley and F. L. Hindle being among the number. Both of these gentlemen in later years made notable presidents and presided over memorable conventions.

Dr. C. Carleton Brown was recommended to the governor for re-appointment on the State Board of Examiners, occasioned by the expiration of his term of service.

**Twenty-one Years'  
History.**

Dr. Hayhurst read his paper entitled, "The History and Organization of the New Jersey State Dental Society; Its Officers and Members," which was full of interesting historical reminiscences covering the first twenty-one years of the society's existence. The response to this address was made by Dr. B. F. Luckey in a speech replete with felicitous expressions. Dr. Luckey pointed out the fact that the International Dental Congress of Chicago for 1893 was conceived, planned and brought out in the Executive Committee meeting of the New Jersey State Dental Society by Dr. Charles A. Meeker. This plan was ultimately carried out, even to the appointment of committees of ten from each society, for the purpose of organizing the Columbian dental meeting—though our State society received neither credit nor honor for projecting this vast enterprise.

**Union Meeting  
of the Pennsylvania  
and New Jersey  
Societies, 1891.**

A joint session with the Pennsylvania Society was held at 8 P. M.

L. Ashley Faught, president of the Pennsylvania, and George E. Adams, president of the New Jersey, State Dental Societies, read their annual addresses. Presidents Faught and Adams presided conjointly at these meetings.

Dr. Young then read a report upon a case of "Acromegaly." Incidents of "Office Practice" were discussed.

Dr. Watkins read Dr. Marvin's paper, which was entitled "Pulpicide, the Best Assurance of Safety and Usefulness," which was responded to by Drs. W. H. Trueman and C. S. Stockton.

A paper on "Anti-Antiseptics" was presented by Dr. R. M. Sanger, which Drs. Joseph Head and George A. Weld discussed in a very lucid manner.

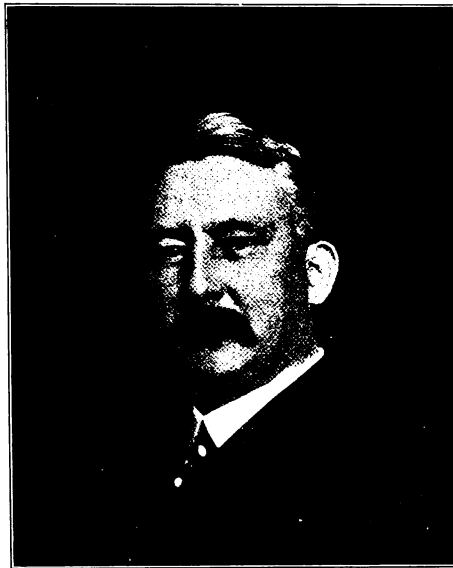
The New Jersey President's address was heartily endorsed by all the speakers present. Both presidential addresses were ordered printed together with the discussion thereon.

Cinics were performed by Drs. H. G. Standborough, J. R. Canady, C. M. Richmond, T. H. Whitesides, R. C. Russell, C. A. Timme, C. S. Beck, H. A. Parr, V. H. Jackson, G. Lenox Curtiss, R. M. Sanger, Joseph Head, C. S. Hardy and J. A. Kimball.

## ITEMS OF INTEREST

A paper entitled "Demonstrations of the Methods and Results of Bacteriological Work Especially as related to Dental Pathology," by Dr. Henry Leffman, was read by Prof. A. P. Bruebaker; the response was made by Dr. Domindo M. Sabatar, for New Jersey, and Prof. E. C. Kirk, for Pennsylvania.

"Nitrous Oxid Gas Viewed from a Practical Standpoint" was the subject of an instructive essay by Dr. J. D. Thomas, which was responded to by Dr. J. A. Osmun for New Jersey and Prof. S. H. Guilford for Pennsylvania.



DR. BENJ. F. LUCKEY  
President 1892

**Twenty-second  
Annual Convention,  
1892.**

A business meeting was held in Newark, July 20, 1892, President B. F. Luckey officiating. Three names were proposed for membership. In 1892 the society put itself on record as being opposed to the granting of degrees by the State Examining Board. It was also resolved that "this society (New Jersey) do not recognize degrees from any other State Examining Board."

**A Joint Meeting at  
Cresson Springs.**

On motion the Legislative Committee was instructed to have the dental law amended "so that dentists may have the same standing in the eyes of the law that physicians have." Thursday morning,

July 21, 1892, the New Jersey State Dental Society met in joint session with the Pennsylvania State Dental Society at Cresson Springs, Pa. President B. F. Luckey, of New Jersey, called the convention to order. President Louis Jack, of the Pennsylvania Society, read his annual address, which was followed by the reading of the annual address of President Luckey, of the New Jersey State Dental Society.

The paper of President B. F. Luckey, which considered the subjects of dental education, dental legislation, State Boards, the World's Columbian Dental Congress in Chicago, and the Dental Protective Association, was an unusually able document, and received the attention which it merited in the ensuing discussion.

The papers presented at the twenty-second annual meeting embraced the subject of "Dental Education," by Dr. G. Carleton Brown; "Dental Education," by Dr. W. E. Magill; "Anti-Conservative Property of Gold; Its Character Value and Availability," by Dr. S. H. Guilford.

The papers were debated by seventeen speakers altogether, among whom may be mentioned Drs. C. J. Essig, Wilbur F. Litch, T. C. Stellwagen, S. H. Guilford, C. S. Butler, R. M. Sanger, S. C. G. Watkins, C. P. Lennox, E. C. Kirk, E. T. Darby and Louis Jack.

The clinic list included twelve operators, among them being Drs. J. H. Downie, Subject, the "Downie Porcelain Crown and Inlay"; C. P. Lennox, "Obtunding Sensitive Dentin with Hot Air, Using the Reichardt Instrument"; C. W. F. Holbrook, "Seamless Gold Crown, First Bicuspid Inserted in Twelve Minutes"; S. H. Guilford, "Gold Filling Mesio-occlusal Surface Right Superior First Molar"; W. A. Capon, "Porcelain Inlays, Crowns and Bridge Work," and others.

Dr. S. C. G. Watkins exhibited his "Sectional Head Rest" for the dental chair, which immediately came into widespread use and has added so much to the comfort of patients submitting to dental operations. Up to this date the idea had apparently never dawned upon the mind of the inventor to borrow the ball and socket joint from the human anatomy and utilize it for the comfort of patients. Great credit is due to Dr. S. C. G. Watkins for bringing out this head rest in practical form.

The New Jersey State Dental Society resumed its session in the West End Hotel at Asbury Park in 1893, when President Oscar Adelberg called the meeting to order and Rev. E. L. Stoddard delivered the invocation.

**The Twenty-third  
Annual Convention,  
1893.**

Nine applicants for membership were elected.

The president's annual address contained pathetic references to the deaths of Drs. F. A. Levy and W. F. Rehfuß, both in the prime of life and at the height of a useful career.

## ITEMS OF INTEREST

The president announced that Dr. Charles A. Meeker was unanimously recommended to fill the vacancy caused by the death of Dr. Levy in the Examining Board at a special meeting.

The World's Columbian Dental Congress in Chicago, in 1893, was favorably alluded to, and the members urged to help in making it a success.

Dr. N. R. Shields lectured on the subject of "Scientific Root Filling."

Dr. R. Ottolengui delivered an elaborate address upon the "Torsion



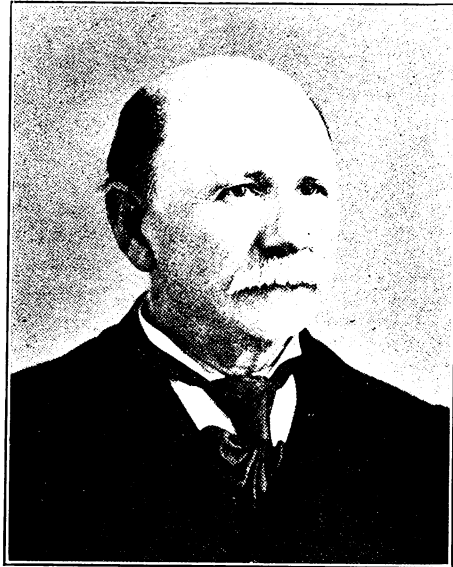
DR. OSCAR ADELBERG  
President 1893

of the Teeth," which was listened to with keen attention. He showed in a very dexterous manner how teeth could be twisted, without twisting the mental faculties of his hearers. A paper was read by Dr. J. A. Bishop entitled "Cleft Palate and Its Treatment"; and Dr. R. M. Sanger read an essay by Dr. George Evans, in his absence, on "A Method in Orthodontia." Pyrozone and trichloroacetic acid came up for a liberal share of attention, while other discussions were participated in vigorously by eleven speakers. The subjects open for fifteen minutes' debate were announced as follows: "Should Immediate Root Filling be Practiced when Purulent Conditions Exist at the Apex?" "What are the Best Materials to Enter into the Composition of Temporary Fillings to Last



for a Minimum of Three Years?" "The Best Method of Obtunding Sensitive Dentin." "Should Arsenic Ever be Used?" "What are the Best Forms of Partial Lower Dentures and Methods for Constructing the Same?" "Corrective Dentistry, Its Present Status."

Clinics were given by Dr. Walter Woolsey, entitled "Filling Bicuspids with Gold, Using the Electric Mallet"; Dr. N. T. Shields illustrated the "Treatment of Difficult Root Canals." Drs. R. Ottolengui,



DR. E. M. BEESLEY  
President 1894

James Trueman and C. N. Peirce held "Consultation Clinics on Irregularities," which were both novel and helpful to those especially interested in orthodontia.

There were several clinical exhibits in addition to the regular professional operations. J. Albert Stultz was recommended for the scholarship in the University of Maryland.

Dr. F. C. Barlow was recommended to the governor for reappointment on the State Board of Dental Examiners, because of the marked ability and unswerving fidelity which he displayed as an examiner.

**The Twenty-fourth  
Annual Convention,  
1894.**

President E. M. Beesley presided over the convention at Asbury Park in 1894. The president's address contained appropriate allusions to the death of Drs. Worthington Pinney and W. S. Holbrook.

## ITEMS OF INTEREST

The convention of the Examining Boards of New York, Pennsylvania, Rhode Island, Delaware, Connecticut, District of Columbia and New Jersey were held in Asbury Park upon the invitation of the New Jersey State Dental Society.

The president reported that his impression of the World's Columbian Congress at Chicago was very favorable.

Ten papers were read, entitled, "Science and Pseudo-Science," by Dr. Henry Burchard; "Methods of Destroying Dental Pulps," by Dr. George A. Maxfield; "Fifty Years in the Dental Laboratory as I Have Seen It," by Dr. L. F. Haskell; "Sulfuric Acid for Opening Root Canals," by Dr. F. R. Callahan; "Facial Neuralgia from a Dento-Surgical Standpoint," by Dr. M. H. Cryer; "The Management of Pulpless Teeth," by Dr. C. N. Johnson; "Possibilities of Systemic Treatment of Dental Disease," by Dr. L. A. Faught; "Ethics," by Dr. J. F. Burkett, read by Dr. G. Carleton Brown; "Dental Legislation, a Plea for an International State Regulation," by Dr. J. G. Palmer; "The Sixth Year Molar," by Dr. J. E. Craven.

The discussion of these papers was actively carried on by twenty-two participants, and was listened to with close attention by the members present.

Clinics were given by Drs. J. Foster Flagg, George Evans, F. C. Barlow, C. M. Richmond, M. J. Kerr, William Fish and J. G. Hollingworth.

The Exhibit Committee reported fifteen exhibits

The death of Dr. R. B. Winder was announced, and appropriate resolutions were passed.

The Membership Committee was instructed to "Require candidates for beneficiary scholarship in the dental colleges to comply with the preliminary educational standard as laid down by the Board of Regents of the State of New York."

Robert E. Topping and J. M. X. Hunter were assigned the scholarships in the Baltimore Dental College and the University of Maryland.

Dr. Charles A. Meeker was recommended to the governor for appointment on the Board of Examiners.

Nine dentists were elected to membership; among them H. S. Sutphen, who became an indefatigable worker in the society and has served with fidelity and honor in all the positions which could be conferred upon him by the society.

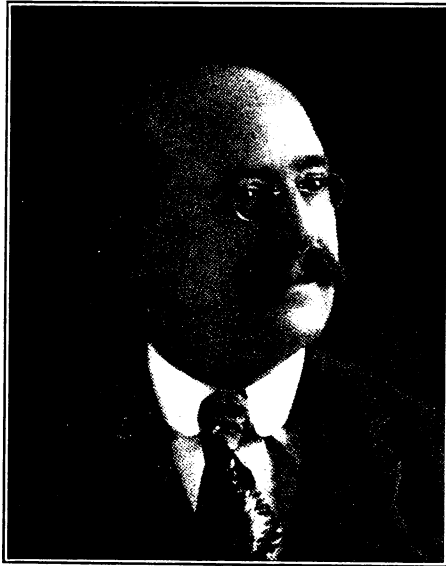
**Inspection of Public  
School Children's  
Teeth Opposed.**

The various standing committees reported, including the committee on the Dissemination of Dental Literature and the Inspection of Children's Teeth in Public Schools. The latter committee stated that "determined opposition to the plan of

personal inspection" had been encountered in the public schools, when they attempted to carry out the practical work of the committee.

A motion was carried providing for the appointment of a committee to arrange for an anniversary celebration of the discovery of nitrous oxid gas by Horace Wells in Hartford, Conn.

Dr. McManus, representing the Connecticut State Dental Society, announced the anniversary of the discovery of nitrous oxid gas by Horace Wells to be held in Hartford, Conn., and invited the members to attend this celebration.



DR. C. W. F. HOLBROOK  
President 1895

Dr. B. Holly Smith, president of the Southern Dental Association, was present and invited the members of the society to come to the Old Point Comfort meeting, August 2.

Dr. Williams Donnally, representing the Washington City Dental Society, was presented, and was accorded the privilege of the floor.

The twenty-fourth was the largest convention yet held, both in regard to attendance as well as programme and professional attainments.

**The Twenty-fifth  
Annual Convention,  
1895.**

President G. W. F. Holbrook occupied the chair at the twenty-fifth annual convention. Rev. George Eringhurst offered prayer.

President C. W. F. Holbrook, in a few well chosen words in his annual address, complimented

## ITEMS OF INTEREST

the society upon reaching its silver anniversary. The good work done by our Examining Board was praised and the general condition of the society's prospects were considered very favorable after the lapse of twenty-five years.

The papers read were upon the subjects of "Preparation of Pulp Cavity and Canals," by Dr. J. F. Flagg; "Electro-Therapeutics Obtunding Sensitive Dentin," by Henry W. Gillett; "The Dental Filling," by Dr. Joseph Head; "Medicinal Prevention of Dental Caries," by Dr. F. H. Winkler; "What Shall be Done for the Teeth of the Poor," by Dr. R. C. Newton; "The Underlying Principle of All Diagnosis," by Dr. James E. Garrettson; "Less Crown Work and More Gold Fillings," by Dr. R. M. Smith; and "The Preservation of the Deciduous Teeth by Means of Caps and Crowns," by Dr. Louis Ottofy.

The clinics, clinical exhibits and demonstrations covered a wide range of subjects, and were numerous.

There were eight papers read, thirty-eight participants in the debates which ensued and twenty-one clinics held.

The series of topics submitted by the American Dental Association were considered. The first is "Can Alveolar Dental Abscesses Form After Complete Sterilization and Obliteration of the Canal by an Impervious Filling, and If So, From What Cause?" "What is the Most Satisfactory Antiseptic and Best Method of Root Canal Sterilization?"

**World's Columbian Dental Congress, Chicago, 1893.** Nine members were elected to active and six to honorary membership.

The work of the New Jersey State Dental Society in conceiving, starting and aiding the successful formation of the World's Columbian Dental Congress in Chicago in 1892, including the "call" issued by New Jersey for that purpose, together with a suitable resolution, appointment of a committee of two and statement of these facts were prepared for publication in the history of the congress.

**The Fair Sex.** The ladies of Asbury Park were invited to inspect the exhibits this year, and their presence added beauty, grace and inspiration to the occasion. Ladies' Day at these conventions should be established and become as popular as the ladies themselves.

The silver anniversary was enlivened by the presence of the witty and epigrammatic Dr. James E. Garrettson, the most famous oral surgeon the world has ever known.

The introduction to this portion of the history of the New Jersey State Dental Society, included a snap-shot view at a young profession leaping the narrow bounds of the dental organs and developing into

broader fields of oral surgery, naming the type of dentist who had nothing to do with these events, the man who is familiarly known as the professional drone. What, therefore, could be a more appropriate conclusion than a tribute to the memory of a self-made man who shamed the professional drone by his incessant activity; who was the pioneer and most influential agent in developing the field of oral surgery. Who was a former practitioner in the State of New Jersey, and an honorary member of this society. Whose consummate skill, remarkable sagacity, intelligent industry, extraordinary ability, and unflagging zeal yielded a scientific masterpiece: Garrettson's "Oral Surgery," which to this day, more than twelve years after his death, is still quoted as a standard authority and text book in some of our leading universities. Whether we contemplate this man's lifework as a philosopher who wrote under the *nom-de-plume* of John Darby, a scientific author whose numerous contributions to his beloved profession became so well known; as a fascinating teacher whose originality and genius impressed itself indelibly upon the minds of the students; as a surgeon whose hand was deft and true, or, as a friend, warm-hearted and loyal, the result is the same. We admire the lifework, we applaud the skill, we love the friend, James Edmund Garrettson, who passed away in 1895, the same year that this section of the history of the New Jersey State Dental Society closes.

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### Ideals in Professional Life.

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By JAMES EDWARD POWER, D.M.D., Providence, R. I.

*Delivered before the Central Dental Association of New Jersey.*

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With not a little hesitation, I have chosen to address you to-night on what constitutes success in professional life. The question of success in life, whether professional or otherwise, is, of course, the most serious problem which the thinking man has to face, and so it is the first business of any intelligent man to determine for what good he is striving. Because, therefore, of the primal importance of this question to all men, it has in its broadest or largest aspect, earnestly engaged the greatest minds of every age—philosophers, poets, teachers, political, social and religious reformers—all have given notable answers to this fundamental question, "What is it that is really worth striving for?" And if perhaps my endeavor to discuss this problem seems presumptuous, remember that I

## ITEMS OF INTEREST

am only trying to say again, what wise and great men have already said many times. You see, therefore, that the subject is almost as old as time itself. But such a problem as this constantly recurs; any ideal that is really worthy must needs be reiterated constantly, and preached with the utmost emphasis before even a few men can be made to hearken and act thereon.

What, then, shall be considered success in professional life? In this day of strife, in this day of commercial activity, which we are pleased to call civilization, many men show by their efforts to accumulate fortunes, that wealth is for them the chief object of attainment.

Not in our profession merely, but also in law and medicine, is the estimation of a man's success calculated in terms of his material possessions. The degree of success, according to this standard, is in direct ratio with the number of dollars which the individual owns.

This same spirit of Philistinism has permeated the ranks of our profession, for how often do we hear one of our confreres heralded as great, for the reason, that for his services he received five, ten, perhaps fifteen dollars an hour. Wealth, gentlemen, is not true success; it is only a means, not an end, and if we measure success by money, in order to be consistent, we must concede that the charlatan or advertising man, who is a recognized menace to all progress, is a successful man, since he gets more money in a given time than many of his ethical brethren.

**Wealth is not  
Greatness.** The world is expressing a true and ultimate judgment upon the lives of the men who have passed away. The world is also placing its seal of condemnation upon all efforts whose inspiration is merely wealth. The jingling of gold or silver has not the true ring of success. It is simply a discordant noise which the unhappy miser, in his narrow mind, mistakes for music.

"Gold, gold, thy clear and echoing sound  
Hath through the ages rung the knell of death and woe,  
And Labor's toiling thousands have been ground beneath thy tyrant Heel.  
Noble purpose; high ideals,  
That reach to Heaven's vaunted blue,  
Hath thy dread power laid low.  
What is there in this metal, hard and cold,  
That sweating, struggling millions strive to win?"

We speak of the glory which is Greece's, and the grandeur which is Rome's, but in vain do we seek for the names of the wealthy Greek and Roman.

On the other hand, who was Socrates, Plato, Aesculapius, Ptolomy Alexander, Hippocrates, Cicero, Celsus, St. Francis, St. Vincent de Paul, and Lister, and Liebig, and Ambrose Parré? Immediately, you reply, they are the heroes and saints and men of genius, whose names are writ large upon the scroll of time, and whose memories shall be as sweet perfume in the years to come; yet not one of them was possessed of wealth. What, then, are their claims to greatness?

You all know, gentlemen, that Hippocrates was the greatest physician of ancient Greece, and that he expressed views relative to the teeth, centuries before the circulation of the blood was ever dreamed of, which, after two thousand four hundred years of study, are found to be absolutely correct. You know, also, that Celsus was a Roman, probably a physician, who wrote a book "The Medicine," which embraced all the views of the Alexandrian anatomists; and that Ptolomy Alexander was one of the men who caused the establishment of the Alexandrian University, the only perfect university which the world has ever known. You would tell me that Socrates went barefoot preaching to the Athenian dandies; and that St. Francis, leaving wealth and luxury and titles, lived a long life of self denial, ministering to the poor of Europe; that St. Vincent de Paul did the same thing among the children of France; that Liebig, the master of agricultural chemistry, the man who had reached that degree of perfection that seems almost impossible for any one man to reach in a lifetime, just before his death, said, "If only I had the power to work as of old, I would be happy;" that Lister solved many of the problems of diseases; that Ambrose Parré was a Frenchman who lived in the fifteenth century; that he commenced life as a barber dentist, finally becoming surgeon general to the French Army, and died after having served four kings of France, in the capacity of dentist; and so on and on I might go only to show that it was the profound reasonings of Plato, the medical skill of Aesculapius, the philanthropic depths of Socrates, the moral simplicity and grandeur of St. Francis, and the fiery eloquence of Cicero. These are the things that have rendered them immortal, and everything which I have mentioned, gentlemen, is in some sense the realization of an ideal.

Is skill to be desired for its own sake? A career that holds this ambition as its beacon light is not only disappointing, but is foredoomed to failure and disillusion; for however great the perfection to which we may attain in our chosen field, none the less are we but narrow specialists since we lack that largeness, that openness and flexibility of mind, which only a wider knowledge brings.

A botanist may, with the greatest ease, differentiate the minutest



## ITEMS OF INTEREST

details of every flower in the garden; an anthropologist may, with recovered bones, reconstruct forms that existed thousands and thousands of years ago; an astronomer may tell you how long it would take, on an aerial railway, to reach the man in the moon; a microscopist may discourse upon the number of micro-organisms that may be placed on the point of a needle; a pathologist may tell you, after an examination of a section of tissue, whether or not such tissues will destroy life. Yet none of these men can claim greatness if his possessions consist of these capabilities alone.

A genius is not necessarily a great man. He may be a Beethoven in the creation of sweet tones; a Raphael in the superior handling of the brush or pencil; a Michael Angelo in the magic skill of unfolding the beautiful forms which are hidden in every piece of granite; a Napoleon in his miraculous genius for war; yet not a great man.

Honor, reputation, fame, social position, are all desirable, but they in themselves do not make, nor are they evidences of success. These in life are not the goal; they rather constitute the prize. Many times they may come unsought and undeserved.

What then, do I consider to be the secret of  
**True Professional Success.** a successful professional career? Simply this, the self realization of an ideal, for it is our ideals that determine our thought and our actions; that keep

us young, and sustain us in our hour of disappointment and trial. For as Carlyle said, "What does it matter whether the ideal be made of this stuff or that, so long as the form we give it be heroic, be poetic?" A real successful life, then, is one which has for its stimulus *Ideals*. The ideals of culture, social utility, and moral rectitude are those that make for the largest success in professional life.

All persons who wished to engage in the practice of medicine, during the time of Hippocrates, were obliged to take oath before God that they would respect all of the obligations which were contained in a document which was almost a psalm, and was known as the Hippocratic oath. Contained therein, were the ideals of Hippocrates, and it was these ideals which made Hippocrates the Hippocrates as we know him, which made the medicine of the Greeks, the medicine of the world.

In order, therefore, to lead a successful professional life, we must have ideals which will stimulate that desire to help a fellow creature. To do this, we must first be good citizens, thereby having a direct interest in all things which will benefit or improve the social, religious, or political conditions of our times. If we wish to make dentistry in reality what it is in name, a learned profession, we must familiarize



ourselves with more than science, we must familiarize ourselves, so far as we can, with art, music, and most important of all, literature. Thus may we become cultured.

I speak not for that culture which places a person upon a higher, but false station; nor that culture which is used as a badge to absolve certain persons from respecting the rights of others; nor that which is transferred from one generation to another, in the form of a family tree, pedigree, or title; nor that which is wrongly used to designate social exclusiveness, but that kind that has for its one object the study of perfection, or, as Matthew Arnold, its great apostle, says, that culture whose "origin" is in the love of perfection; it is a study of perfection. It moves by the force, not merely or primarily of the scientific passion for pure knowledge, but also of the moral and social passion for doing good. To render an intelligent being yet more intelligent. To make reason and the will of God prevail. Not a having and a resisting, but a growing and a becoming is the character of perfection as culture conceives it; and here too, it coincides with religion."

And here, too, the exacting duties which are required of us, as professional men, prevent us from knowing each other well, and that which we do know is not always truth. Therefore, the social obligations as Christ taught them are the only true ones. To love one's neighbor as one's self; to equalize one's neighbor as one's self; to elevate one's neighbor to that plane where we may regard him as our equal. On such a foundation was Christian society founded. Its age might seem to suggest its worth. While working along the narrow channels of a professional career does not in itself constitute success in life, it must be reckoned with as an etiological factor in the attainment of a general success. Carlyle has said, that the conditions which did not contain the actual for man did never exist. Our special work should be carried on, first, because we are in sympathy with, and firmly believe in, what we are doing; second, because we believe that we are contributing something to the happiness of the people. Let us then, work, and as Emerson says, "hitch our wagon to a star." Again, we may remember the words of Carlyle, "Even though it be but the infinitesimal fraction of a product, it is the most thou hast in thee; out with it, then, in God's name produce."

The professional man must devote his heart and head to the lifting up of the profession till it is synonymous with law, justice, and right. If we are wise, we will go over the pages of its past, picking out those, pagan and Christian, that portray its progress from the crude laws that told men to take an eye for an eye, a tooth for a tooth, and a life for



## ITEMS OF INTEREST

a life, to that splendid manifestation of its highest attainment found in the Christian doctrine, not only of doing unto others as one would be done by, but in that higher doctrine which decrees it a duty to forgive one's enemies.

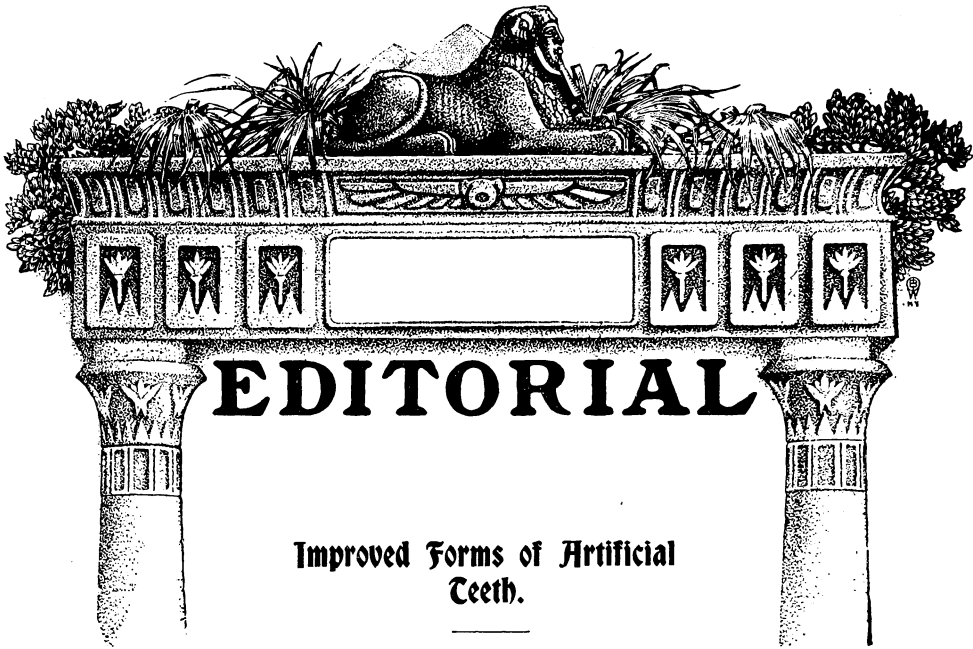
Among the early pages of history, there is one that tells the story of the greatest of the pagan lawyers, Papinian, who, when Caracalla murdered his own brother, refused the emperor's request that he, Papinian, prepare a brief in the emperor's defense. Rather than obey he chose to die. Who was this Papinian; a poor and obscure lawyer? Not at all. His genius illumines the entire legal sky, not only of his time, but of the ages between his appearance at the bar, and the time when the Justinian Code was completed. When Tribonian and the codifying committee appointed by Justinian to codify the laws of Rome were about to begin their great epoch making work, Justinian bade them yield to Papinian's opinion, though Gaius, Ulpian, and many other of Rome's great lawyers were on the other side.

France, on a like occasion, points to D'Aguesseau, who, when asked by a perfidious king to perjure himself, refused, and like the others, chose death rather than sacrifice his loyalty to law, justice, and right.

Words are only weak instrumentalities when one wishes to say what these men's purposes were in regard to their professions.

May these same motives, these same ideals, inspire us. These were the ideals which inspired the architects who built the most beautiful Gothic cathedral the world has ever known. The cathedral stands, but the names of the architects are unknown. Again these same ideals caused the unknown sculptor to carve that most perfect rose which was discovered a few years ago by a workman who was sent to repair the top of one of the columns of the cathedral of Milan. There he found the rose, facing toward heaven, which had rested in this position for over six hundred years, all unseen, or seen but by the eyes of heaven. Yet it was possibly the masterpiece of the artist.

Great success in life then is not calculated by the applause of the multitude, but is measured according to the services which we have rendered to the world and to its people, and the motives which inspired them. A man whose greatness among men is inspired by unselfish motives, is the truly successful man. Self knowledge, self reverence, self conduct, these then alone should lead life to sovereign power, and yet, as Tennyson says, "but not for power; power of itself would come uncalled for; but to live the law, acting the law we live by without fear, and because right is right, to follow right, were wisdom in the scorn of the consequence."



From time to time some student of the subject points out how poorly suited to the proper mastication of food are dentures composed of the artificial substitutes supplied by our tooth factories, and the manufacturers are held responsible for the badness of the molds. In our November issue we published a communication on this subject from Dr. J. Leon Williams. Dr. Williams pointed out that it is next to impossible to reproduce normal occlusion with the porcelain teeth purchaseable at dental depots. Dr. Williams also asked for an expression of opinion from the dentists of the world, as to the desirability of changing the prevailing forms of tooth molds. In the December issue we did not touch on this subject, thinking perhaps that between the date of publication of the November issue and the date of sending the December number to press there had not been time enough for dentists to write the requested opinions. Now, however, more than seven weeks have passed.

It is estimated that there are more than thirty thousand dentists in the United States, the majority of whom, of course, to some extent furnish their patients with artificial teeth. Not one of these has responded to Dr. Williams's letter by writing to us. From a private letter we learn



## ITEMS OF INTEREST

that Dr. Williams himself has received three replies, one from this country and two from Englishmen. Where, then, is the evidence, commercial evidence, that there is any demand for new molds?

Anyone who has studied the articulating of artificial teeth, in accordance with the rules set forth by Bonwill, will admit that the artificial teeth carried in stock are woefully wrong in shape. To so fashion a complete upper and lower denture, setting the teeth with the assistance of an anatomical articulator, the dentist must grind every tooth, especially the morsal surfaces of bicuspid and molars. This not only destroys all semblance of cusp formation, but removes the surface glaze from the porcelain and renders cleanliness just so much more difficult. Moreover, the labor involved and the time required makes this practically prohibitive, except for very high fees. The writer once kept accurate record and found that he had spent eleven full hours in articulating an upper and lower denture.

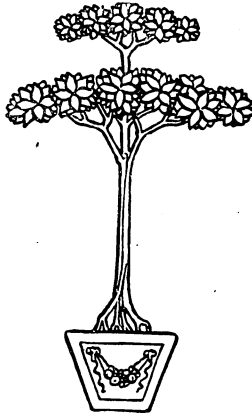
There is no disputing this argument, but it is hardly one that will appeal to the manufacturers. Tooth makers, like the makers of any other objects of barter, can only be expected to regulate themselves by the laws of supply and demand. A style in hats, gloves, clothing, furniture, glassware, breakfast food or any other saleable article will be adhered to just so long as the maker finds sale for his product, and no longer. The more enterprising merchant may endeavor to set the fashion, to originate a new style and to create a new market for an improved article; but he will only do this if there appears to be a demand for a change. It is not different, and can not be different, with artificial teeth. The dealers will not consider the commercial proposition of making new molds, and producing new tooth forms, until the demand for the change is manifest among dentists who buy and use their product.

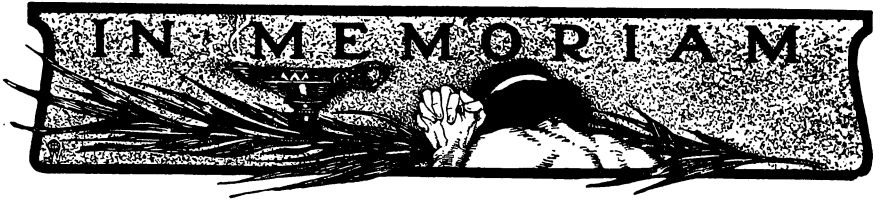
Supposing, then, that the dentists of the world should show some interest in this subject, and supposing that it should become evident that new forms of artificial teeth are desired, it must become the task of the dentist himself to dictate just what this new shape shall be. This is an Herculean task, but it is one to the solution of which Dr. Williams seems willing to bend his energies. But Dr. Williams is somewhat in the same position as the tooth manufacturers. Why should he undertake this work for some fifty thousand dentists, only three of whom seem sufficiently in-

## EDITORIAL

terested to even write a letter commending the enterprise? Why should Dr. Williams give months of toil to the study of tooth forms merely to lighten the labors of the dentists? Why not allow the dentists to grind porcelain teeth, as heretofore, needlessly for hours, if they prefer that to the labor of either helping, or at least encouraging, Dr. Williams and the tooth makers to produce teeth which can be made to simulate normal occlusion without so much grinding?

Let us, therefore, ask the members of the profession in this country "Do you desire an improvement in the shapes of porcelain teeth?" If so, please write us your views. Tell us what is required.





## **Dr. F. D. Sherwin.**

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Dr. Sherwin was born in Roseville, Illinois, November 26, 1865, and died at his home in Lincoln, Nebraska, October 18, 1907, at the age of forty-two years, ten months, twenty-two days.

When a child, his parents moved to Traer, Iowa. At the age of fourteen years, he went with his parents to Edgar, Nebraska. On May 6, 1891, he was married to Miss Ida Searle. Dr. and Mrs. Sherwin remained in Edgar three years after marriage, when they came to Lincoln, April 1894. Lincoln has been their home since. Dr. Sherwin began his profession as a dentist in Edgar, Nebraska, and continued it in Lincoln and with fine success. He was prominent in his profession in this city and State, and his judgment was often sought by men his senior in years. He was a member of the Second Presbyterian Church of Lincoln, coming by certificate from the church at Edgar. He was a faithful and useful member. He was prominent in its councils, being an officer during almost the entire time since uniting with the church.

He was a real convert to Foreign Missions. Two years ago Dr. and Mrs. Sherwin took upon themselves the support of a native pastor in Loas, Siam. The doctor took great delight in him and his work.

He also took great interest in the local church, showing his great devotion by his words, work, and money.

He was always interested in the civic affairs of the city; in good government; in the improvement of the city. His strict but sane views upon the keeping of the Lord's Day and the control of the liquor traffic were well known.

He was a man of high ideals. A valuable man in the community. Conscientious in all his work and in his belief. The city and dental profession will miss him.

WHEREAS, The all wise Providence has removed from this life, Dr. F. D. Sherwin, who passed to the great beyond on October 18, 1907, and



WHEREAS, The members of the Lincoln Odontographic Society feel a deep loss in the death of Dr. Sherwin, because of the Christian spirit he always exhibited, as well as striving at all times to perfect himself for the better service of mankind, and ready and willing at all times to lend a helping hand to those in need; therefore be it

*Resolved*, That in the death of Dr. Sherwin our society has lost a man of sterling worth, whose progress and efforts in his profession should be a source of pride to his co-workers, and from whose example all hope to profit; also,

*Resolved*, That our deep sympathy is with the bereaved family, and that a copy of these resolutions be sent to his widow, to the dental journals, and be spread upon our society records.

H. A. SHANNON,  
CLYDE DAVIS,  
Committee.

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### **Dr. R. B. Donaldson.**

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WHEREAS, It has pleased the Divine Creator to take from our midst one of our most esteemed members, a man to whom the profession owes so much; be it

*Resolved*, That through the death of Dr. R. B. Donaldson, one of its founders, the District of Columbia Dental Society has lost a most valuable member and advisor, one whose loss will be keenly felt for years to come.

*Resolved*, That by his death the profession and community have lost one whose long, useful life has been devoted to the uplifting of both, and whose strong Christian personality in his intercourse with his fellow-man has endeared him to all.

*Resolved*, That the District of Columbia Dental Society appoint a committee to attend the funeral of the late Dr. R. B. Donaldson, and that a copy of these resolutions be forwarded to his devoted family.

*Resolved*, That these resolutions be spread upon the minutes of the society and a copy be sent to the daily papers and dental journals.

H. C. THOMPSON,  
I. CURTISS SMITH,  
M. F. FINLEY,  
Committee.

## ITEMS OF INTEREST

### Dr. Wm. M. Hunt.

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The District of Columbia Dental Society, called in special session to hear the announcement of the death of Dr. William M. Hunt, an honored and beloved member, adopted the following:

WHEREAS, The District of Columbia Dental Society has learned with deep sorrow and regret of the death of its fellow-member and late president, William M. Hunt, Doctor of Dental Surgery, who died in the forty-fourth year of his age, at his home, 117 Second Street Northeast, Washington, D. C., October 20, 1907, and

WHEREAS, Dr. Hunt's admirable personal qualities and devotion to his profession commanded the respect of his professional acquaintance and endeared him to a large number of friends and patients; therefore be it

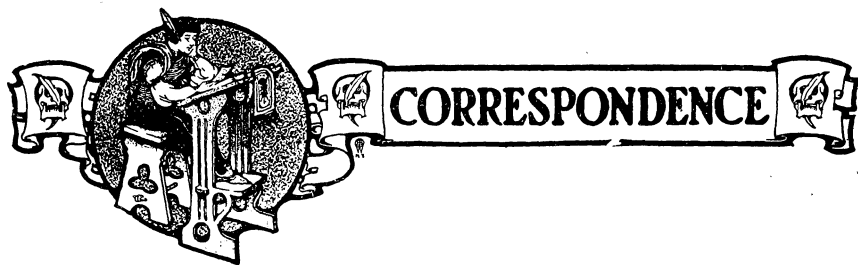
*Resolved*, That in the untimely death of Dr. Hunt this society has lost a respected and useful member, the community an honored and worthy citizen, a large clientele a skilled, kind and faithful servant, and his family a tenderly affectionate and devoted husband and father, who, in his last hour, expressed fearlessness of death and a desire to live only for their welfare.

*Resolved*, That these resolutions be spread upon the minutes and a copy be sent to his bereaved family with an expression of deep sympathy for them in their profound sorrow.

ARTHUR D. WEAKLY,  
C. W. SCOTT,  
WILLIAMS DONNALLY,  
Committee.







### **Cleansing Barbed Broaches.**

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EDITOR OF ITEMS OF INTEREST,

DEAR SIR: The following method for cleaning barbed broaches I believe may be of some assistance to our professional brothers.

Place the broaches in a solution of sodium dioxid for several hours, then remove and rotate in a small piece of rubber dam, which will remove all particles that cling to the barbs and which could not be removed otherwise. It will also prevent rusting of the broaches.

Sincerely yours,

ERNEST WEBSTER.

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### **Inlay Work Not New.**

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EDITOR OF ITEMS OF INTEREST.

Dear Sir: Twenty years ago Dr. G. F. Lampkin of Jacksonville, Fla., was in the habit of using gold inlays in his practice. The doctor was an old-time dentist who had never become proficient in the use of cohesive gold for contouring, and so devised this method where extensive restorations were called for.

I do not write this from hearsay, as I actually saw the work, fully twenty years ago.

Dr. Lampkin has now been dead many years, he has a son now residing in this city, and it is barely possible that he may have some of these specimens among his father's belongings; I shall make it a point to see him and procure these samples, and if I am successful, will forward them to you.



## ITEMS OF INTEREST

Unless some one comes forward who has seen inlays which were done more than twenty years ago, I shall make the claim that a native Floridian is the father of inlays; I am anxious to do this, as some people are inclined to the opinion that we are behind the times in this part of the country.

Very truly,

F. E. BUCK.

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### Society in Gary, Ind.

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GARY, Ind., December 20, 1907.

EDITOR OF ITEMS OF INTEREST.

DEAR SIR: Thinking that you may be interested to hear from the new and much talked of Gary, Ind., and of the new dental society formed there, we send you the following:

Saturday evening, December 14, the dentists of Gary, Ind., met and organized the Calumet Dental Society. Officers: Dr. J. D. Long, president; Dr. B. S. Gardner, vice-president; Dr. George W. Winslow, secretary and treasurer.

Very truly,

J. D. LONG, President.

GEORGE W. WINSLOW, Secretary.





# SOCIETY ANNOUNCEMENTS

## National Society Meetings.

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American Dental Society of Europe, London, England, beginning July 31, 1908.

National Association of Dental Examiners and the National Association of Dental Faculties, Back Bay, Boston, Mass., July 24, 25, 27, 1908.

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## Society Meetings.

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Alumni Association of Chicago College of Dental Surgery, Chicago, Ill., January 15, 1908.

G. V. Black Dental Club Clinic, February, 1908.

District of Columbia Board of Dental Examiners, January 2, 3, 4, 1908.

Indiana State Board of Dental Examiners, Indianapolis, Ind., January 14, 15, 16, 1908.

Institute of Dental Pedagogics, New Orleans, La., December 31, 1907, January 1, 2, 1908.

New Mexico Board of Dental Examiners, Albuquerque, New Mex., May 26, 27, 1908.

Northern University Dental School Clinic, Chicago, Ill., January 14, 1908.

Rhode Island Dental Society, Providence, R. I., January 14, 1908.

St. Louis Society of Dental Science, St. Louis, Mo., January 21, 1908.

South Dakota State Board of Dental Examiners, Sioux Falls, South Dakota, January 14, 1908.



## **National Association of Dental Examiners and the National Association of Dental Faculties.**

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The annual sessions of the National Association of Dental Examiners and the National Association of Dental Faculties will be held at the Brunswick, Boylston Street, Back Bay, Boston, Mass., commencing at 10 o'clock A. M. Friday, July 24, and continuing the 25th and 27th. The rates will be: European plan, without bath, \$1.50 per day and upward; rooms with bath, \$1.00 per day extra; when rooms and bed are occupied by more than one person, \$1.00 per day additional will be charged. This hotel is contiguous to the Boston Commons, and is first class in every particular. Five additional hotels are in the immediate vicinity, the Westminster, the Lenox, the Vendome, the Victoria, Copely Square, Oxford. The "Brunswick" will be the headquarters of both associations. Commodious meeting rooms for both will be ready for Thursday evening. Communications from New York by all rail, quick service. Through Long Island Sound via Fall River, and all-water is interesting to the visitor with very reasonable rates of travel. Come and see historic Boston.

CHARLES A. MEEKER, D.D.S.,

Chairman for N. A. D. E.

EDWARD W. BRANNIGAN, D.D.S.

Chairman Executive Committee for N. A. D. F.

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## **National Association of Dental Examiners, 1907-1908.**

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The following is a list of the officers of the National Association of Dental Examiners elected at their last annual meeting in Minneapolis: President, Frank O. Hetrick, D.D.S., Ottawa, Ka.; vice-president for the South, F. A. Shotwell, D.D.S., Rogersville, Tenn.; vice-president for the East, T. R. Henshaw, D.D.S., Middletown, Ind.; vice-president for the West, J. J. Wright, D.D.S., Milwaukee, Wis.; secretary and treasurer, Charles A. Meeker, D.D.S., 29 Fulton Street, Newark, N. J.

Committee on Colleges.—J. G. Reid, D.D.S., chairman, Trude Building, Chicago, Ill.; L. L. Barber, D.D.S., Toledo, Ohio; G. S. Todd, D.D.S., Lake City, Minn.

Joint Conference Committee.—J. F. Downsley, D.D.S., chairman, 175 Tremont Street, Boston, Mass.; R. D. McIntosh, D.D.S., Monet, Mo.; J. A. Hall, D.D.S., Collinsville, Ala.

## SOCIETY ANNOUNCEMENTS

Joint Tabulating Committee.—Alphonso Irwin, D.D.S., chairman, 425 Cooper Street, Camden, N. J.; J. F. Downsley, D.D.S., Boston, Mass.; J. G. Reid, D.D.S., Chicago, Ill.

Joint Committee on National Council of the N. A. D. E. and N. A. D. F.—H. C. Brown, D.D.S., 185 East State Street, Columbus, Ohio, chairman N. A. D. E.; Geo. E. Mitchell, D.D.S., Haverhill, Mass.; H. W. Campbell, D.D.S., Suffolk, Va.; J. D. Patterson, D.D.S., Keith Building, Kansas City, Mo., chairman N. A. D. F.; H. W. Morgan, D.D.S., Nashville, Tenn.; Wilbur F. Litch, D.D.S., Philadelphia, Pa.

Dental Corporations Committee.—J. R. Wallace, D.D.S., chairman, "The Masonic," Louisville, Ky.; Charles A. Meeker, D.D.S., Newark, N. J.; C. P. Pruyn, D.D.S., Chicago, Ill.

Credentials and Membership Committee.—C. H. Oakman, D.D.S., chairman, 29 to 31 State Street, Detroit, Mich.; J. H. Wallace, D.D.S., Omaha, Neb.; W. G. Mason, D.D.S., Tampa, Fla.

Resolutions Committee.—T. J. Barrett, D.D.S., chairman, Worcester, Mass.; W. H. Collins, D.D.S., Vermillion, S. D.; W. C. Dalrymple, D.D.S., Ogden, Utah.

Publication Committee.—J. E. Chase, D.D.S., chairman, Ocala, Fla.; C. Stanley Smith, D.D.S., Cincinnati, Ohio; H. B. Purl, D.D.S., Kirksville, Mo.

Committee for Promoting a System of Uniform Examinations.—T. F. Turner, D.D.S., chairman, 721 Olive Street, St. Louis, Mo.; E. D. Brower, D.D.S., Lemars, Iowa; A. L. LeGro, D.D.S., Three Rivers, Mich.

Committee on Contracts and Accommodations.—Charles A. Meeker, D.D.S., chairman, 29 Fulton Street, Newark, N. J.

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### The American Dental Society of Europe.

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Officers.—President, Dr. Kirk A. Davenport, London; vice-pres., Dr. Charles Rathbun, London; hon. treas., Dr. William M. Cooper, Frankfurt a-M.; hon. sec., Dr. John W. Gale, Cologne. Executive Committee.—Dr. George H. Watson, Dr. W. M. Griswold, Dr. L. J. Mitchell, Dr. Albert Warren, Dr. N. S. Jenkins, Dr. George Martin; ex-officio members: Dr. Kirk A. Davenport, chairman; Dr. John W. Gale, hon. sec. Membership Committee.—Dr. T. G. Patterson, Dr. H. C. Merrill, Dr. H. J. Moore; ex-officio members: Dr. Charles Rathbun, chairman; Dr. John W. Gale, hon. sec.



## ITEMS OF INTEREST

The thirty-fifth annual meeting of the American Dental Society of Europe will be held in London, England, beginning July 31, 1908.

Notice is given thus early that American practitioners may include this meeting in their European itinerary.

Any information will be gladly given by writing the undersigned.

J. W. GALE, Hon. Secretary.

79 Hohenzollern-Ring, Cologne, Germany.

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### **Rhode Island Dental Society.**

The Rhode Island Dental Society will hold its annual meeting, Tuesday, January 14, 1908, in Gelb's Parlors, 193 Westminster Street, Providence.

Commencing one o'clock, an extensive exhibit will be made of newest dental appliances, and clinics in new processes will be given.

Dinner will be served at six o'clock, followed by essays by prominent men.

Those intending to be present at dinner kindly send postal to Dr. J. E. Heap, 3 Greene Street, that a place may be reserved.

A. M. POTTER,

J. H. MANNING,

J. E. HEAP,

Committee.

Informal dress. Cards for non-members of the Society, \$1.25.

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### **The G. V. Black Dental Club Clinic.**

The G. V. Black Dental Club of St. Paul, will hold its annual midwinter clinic in February, 1908. It is our intention to make this meeting the most interesting and profitable of all which we have held.

A cordial invitation is extended to the members of the profession to attend and assist us in making this meeting the best that has ever been held in the Northwest.

Dates and program will be published later. For further information, address,

R. B. WILSON, Secretary.

Am. Nat. Bank Building, St. Paul, Minn.



## **St. Louis Society of Dental Science, Annual Meeting.**

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The St. Louis Society of Dental Science will hold its annual meeting at the Jefferson Hotel, 2.30 P. M., January 21, 1908.

Lecture on "The Lifework of Prof. Miller," by Edward C. Kirk, D.D.S., Sc.D., Philadelphia.

Discussion opened by Dr. N. S. Hoff, Ann Arbor, Mich.

DR. LOUIS P. BETHEL, Columbus, Ohio.

The annual banquet will be given at 7 P. M., of the same day, in honor of Prof. Edward C. Kirk, dean of the Dental Department, University of Pennsylvania, and editor of *The Dental Cosmos*. The speakers will be: Rev. Dr. Henry Stiles Bradley, pastor St. Johns M. E. Church, St. Louis; Hon. Arthur W. Sager, circuit attorney, St. Louis; Dr. Louis P. Bethel, editor, *The Dental Summary*, Columbus, Ohio; Dr. Neville S. Hoff, editor *The Dental Register*, Ann Arbor, Mich.; Dr. Charles H. Darby, St. Joseph, Mo.; Dr. F. G. Worthley, associate editor *The Western Dental Journal*, Kansas City; Dr. W. L. Whipple, St. Louis; Dr. Burton Lee Thorpe, associate editor *The Dental Brief*, St. Louis, Mo.

The profession are invited to attend both the lecture and banquet.

For reservation for same and other information, address Dr. Richard Summa, Oriel Building, St. Louis.

W. L. WHIPPLE,

E. E. HAVERSTICK,

HERMAN F. CASSELL,

Executive Committee.

D. O. M. LE CRON, President,

C. O. SIMPSON, Secretary.

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## **National Capital Dental Society.**

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At the regular meeting of the National Capital Dental Society held Saturday, December 7, the following were elected to office for the coming year: President, Dr. Charles W. Cuthbertson; vice-president, Dr. William B. Daly; recording secretary, Dr. J. P. Devlin; corresponding secretary, Dr. J. W. Hollingsworth; treasurer, Dr. W. F. Heyser; librarian, Dr. C. H. Howland.



### **To the Alumni of the New York College of Dentistry.**

Any alumnus seeing this notice is kindly requested to send his name, address, and year of graduation to the undersigned.

MAURICE GREEN, D.D.S.

(Acting for the Alumni Association of the N. Y. C. D.)

1190 Lexington Avenue, New York City.

### **Alumni Association, Dental Department, Milwaukee Medical College, Marquette University.**

The second annual clinic and exhibit of the Alumni Association, Dental Department, Milwaukee Medical College, Marquette University, will be held in Milwaukee, Wis., January 21 and 22, 1908.

Preparations are being made for an excellent programme.

Members of the dental profession are cordially invited.

EDWARD C. WACKLER, Secretary.

### **Alumni Association of the Chicago College of Dental Surgery.**

The annual meeting of the Alumni Association of the Chicago College of Dental Surgery will be held in the College Building on Wednesday, January 15, 1908.

It is hoped that there will be a large attendance, especially of graduates of the college.

DR. T. L. GRISAMORE, President.

DR. H. C. PEISCH, Secretary.

### **New Mexico Board of Dental Examiners.**

The next meeting of the New Mexico Board of Dental Examiners will be held in Albuquerque, May 26 and 27, 1908. Applicants for examination must be graduates of a reputable dental college. For further information address

M. J. MORAN, Secretary.

Deming, New Mexico.





## **South Dakota State Board of Dental Examiners.**

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The next meeting of the South Dakota State Board of Dental Examiners will be held at Sioux Falls, S. D., Tuesday, January 14, 1908, beginning at 1.30 P. M. All persons desiring to take this examination must make application to the secretary, and send fee of ten dollars at least one week prior to the above date. No candidates will be received for examination who do not make application as above specified. Applicants are required to bring dental engine, filling materials, articulators, teeth, and all appliances necessary to do crown and bridge work.

G. W. COLLINS, Secretary.

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## **Kansas State Board of Dental Examiners.**

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The following are the present members of the Kansas State Board of Dental Examiners: O. H. Simpson, D.D.S., president, Dodge City, Kan.; G. F. Ambrose, D.D.S., vice-president, Eldorado, Kan.; F. O. Hetrick, secretary, Ottawa, Kan.

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## **District of Columbia Board of Dental Examiners.**

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The semi-annual examination of the Board of Examiners of the District of Columbia will be held January 2, 3, and 4, 1908.

All applications for examination must be accompanied by a fee of ten dollars, and should be filed with

WILLIAM B. DALY, Secretary.

1340 New York Avenue Northwest, Washington, D. C.

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## **Indiana State Board of Dental Examiners.**

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The Indiana State Board of Dental Examiners will hold its next regular meeting in the State House at Indianapolis, January 14, 15, and 16, 1908. At this meeting all applicants for registration in this State will be examined. For further information apply to

F. R. HENSHAW, Secretary.

Middletown, Ind.



## **Oklahoma Board of Dental Examiners.**

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The new State Board of Dental Examiners for Oklahoma, is composed of the following dentists:

W. W. Bryan, Claremore, president; A. C. Hixon Guthrie, secretary; F. C. Seids Perry, treasurer; E. A. Bonnell, Muskogee, and M. W. Murray, Poteau. The board will meet at Muskogee, on January 28-30, 1908, at which time all applicants for registration under the State Constitution will be admitted, provided that they have made application to the secretary. He will send out blank forms as soon as the names and residences are known. Each person who is to be an applicant should send his name and address to the secretary at once. A general examination will be conducted also at the same time. For information, address the secretary.

A. C. HIXON, Secretary.

Guthrie, Okla.

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## **Northwestern University Dental School Clinic.**

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The annual clinic of the Northwestern University Dental School will be held at the University Building, corner Lake and Dearborn Streets, Chicago, on Tuesday, January 14, 1908.

A hearty invitation is extended to all graduates and ethical practitioners.

H. E. HARRISON, M.D., D.D.S., President,  
GEORGE R. PUFFER, D.D.S., Secretary.

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## **First District Dental Society.**

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The annual clinic of the First District Dental Society (formerly the Detroit Dental Society), will be held in Detroit, on Saturday, February 15, 1908. All ethical dentists are cordially invited to attend.

DON M. GORHAM, Secretary.